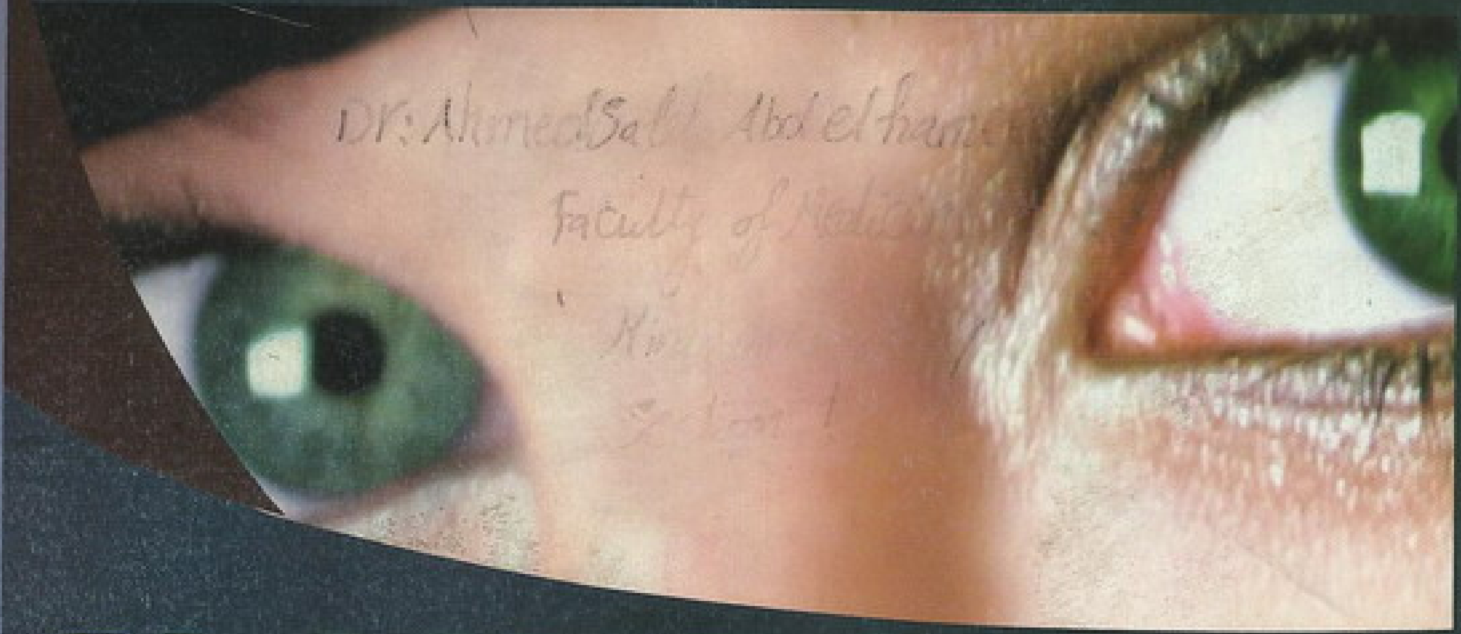

DR: AhmedSal Abdelham
Faculty of Medici
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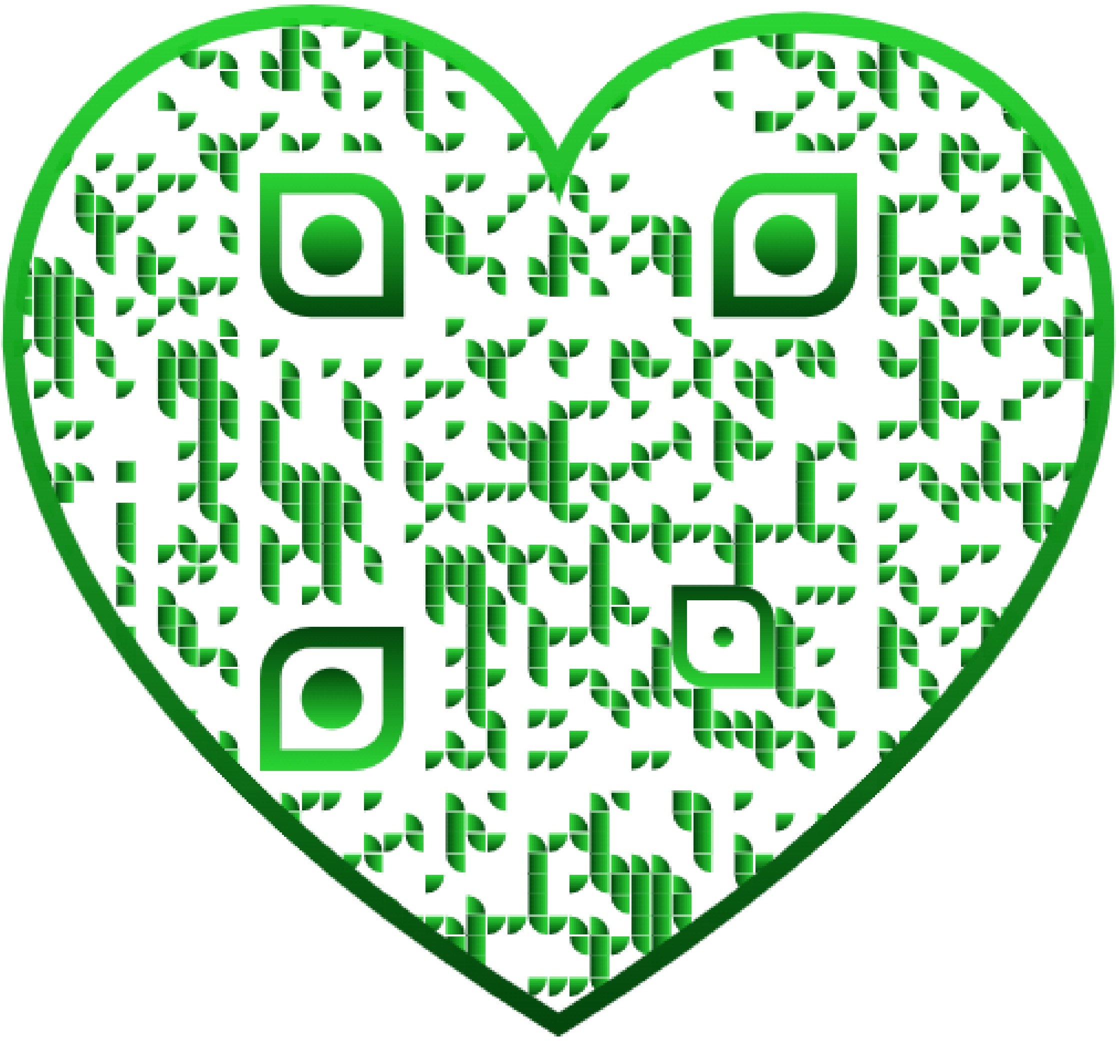
Abd El- Haleem
Atlas OF OPHTHALMOLOGY

by
Dr. M. Abd El-Haleem

5th
Edition

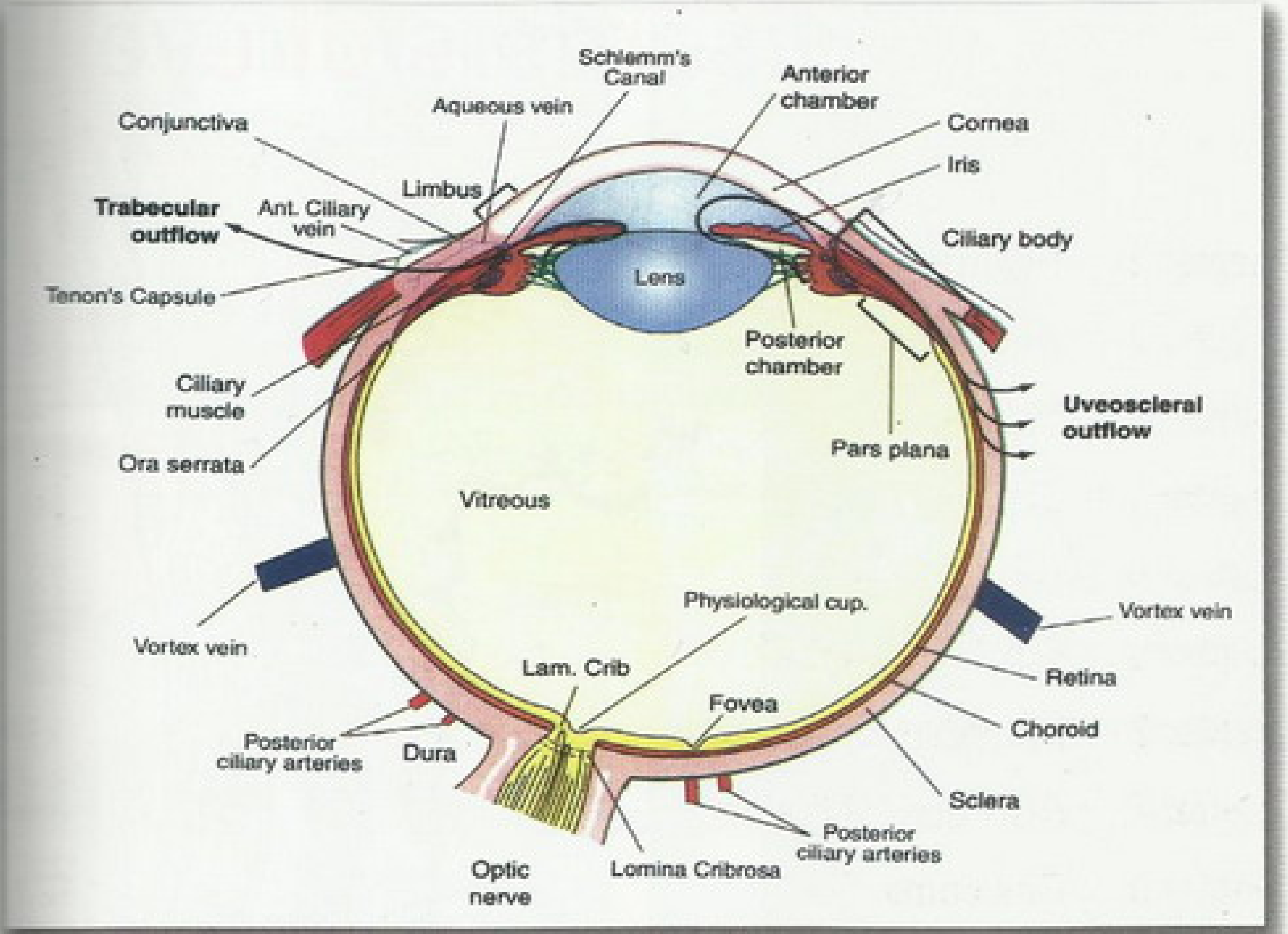


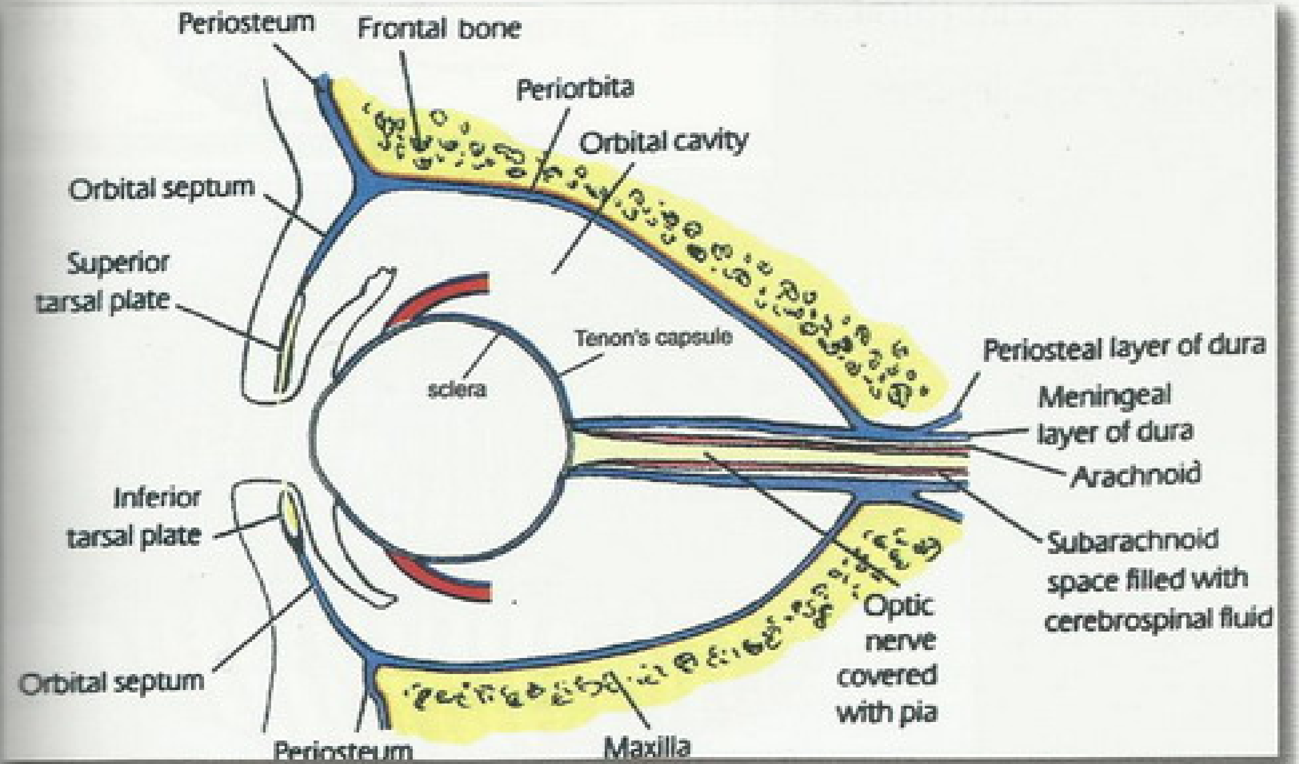
Contents

		Page
Chapter 1	Disorders of eye Lid	5
Chapter 2	Disorders of Conjunctiva	34
Chapter 3	Disorders of Lacrimal system	51
Chapter 4	Disorders of The Cornea	58
Chapter 5	Disorders of The Sclera	79
Chapter 6	Disorders of the orbit	83
Chapter 7	Disorders of the Uveal tract	91
Chapter 8	Disorders of the Lens	103
Chapter 9	Glaucoma	123
Chapter 10	Disorders of the Retina & Optic N.	138
Chapter 11	Squint (Strabismus)	166
Chapter 12	Eye Injuries	174

الذين يزرعون بالدموع يحصدون بالابتهاج
انظروا إلى الأجيال القديمة وتأملوا. هل توكل أحد على الرب فخزي؟
الذي بدأ معك اول الطريق لن يتركك في منتصفه
هو شايف هو عارف مش بينسى ☺

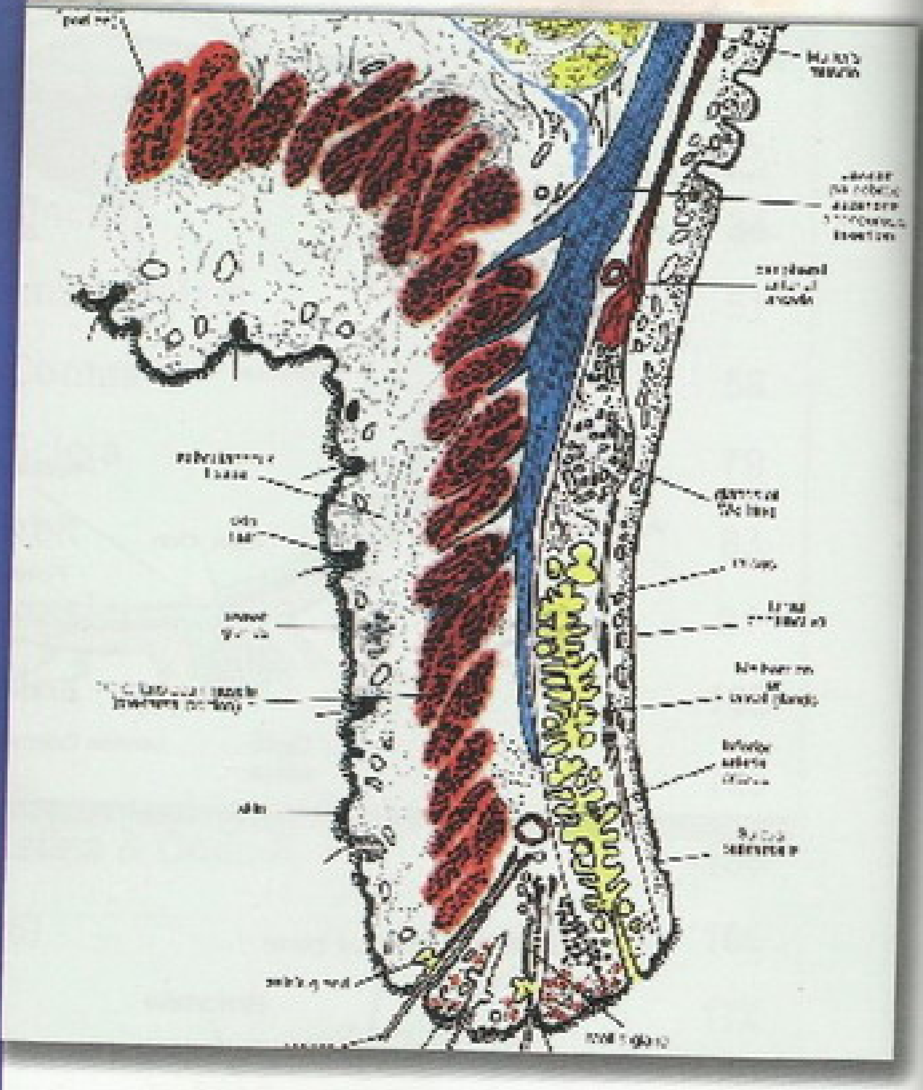
Anatomy of the eye ball

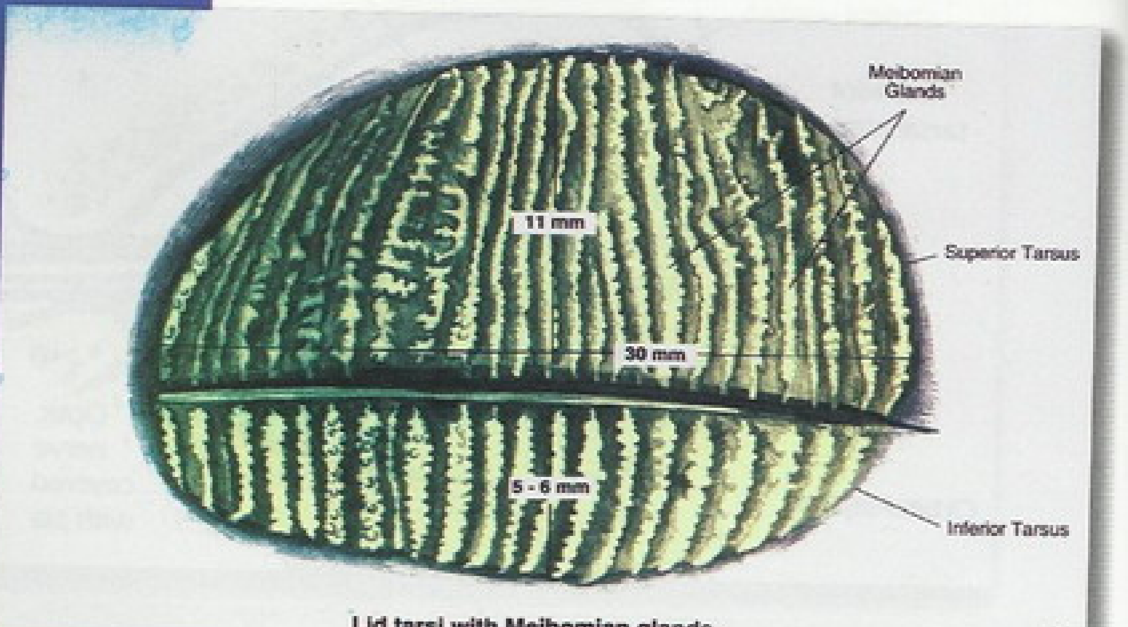

Schlemm's Canal
Anterior chamber
Aqueous vein
Conjunctiva
Cornea
Iris
Limbus
Trabecular outflow
Ant. Ciliary vein
Ciliary body
Lens
Tenon's Capsule
Posterior chamber
Ciliary muscle
Uveoscleral outflow
Pars plana
Ora serrata
Vitreous
Physiological cup.
Vortex vein
Vortex vein
Lam. Crib
Retina
Fovea
Choroid
Posterior ciliary arteries
Dura
Sclera
Posterior ciliary arteries
Optic nerve
Lomina Cribrosa


Periosteum
Frontal bone
Periorbita
Orbital cavity
Orbital septum
Superior tarsal plate
Tenon's capsule
sclera
Periosteal layer of dura
Meningeal layer of dura
Arachnoid
Inferior tarsal plate
Subarachnoid space filled with cerebrospinal fluid
Optic nerve covered with pia
Orbital septum
Periosteum
Maxilla

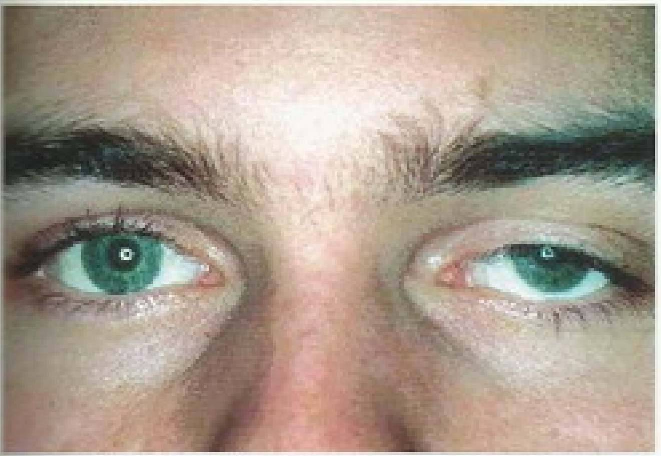
Chapter 1

Disorders of eye Lid

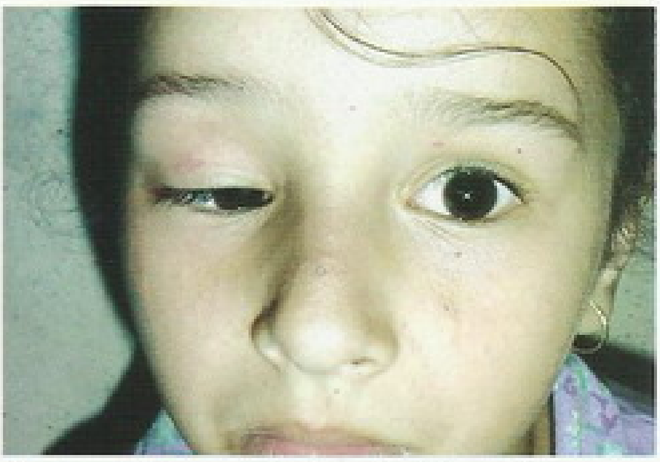



Meibomian Glands
11 mm
Superior Tarsus
30 mm
5 - 6 mm
Inferior Tarsus

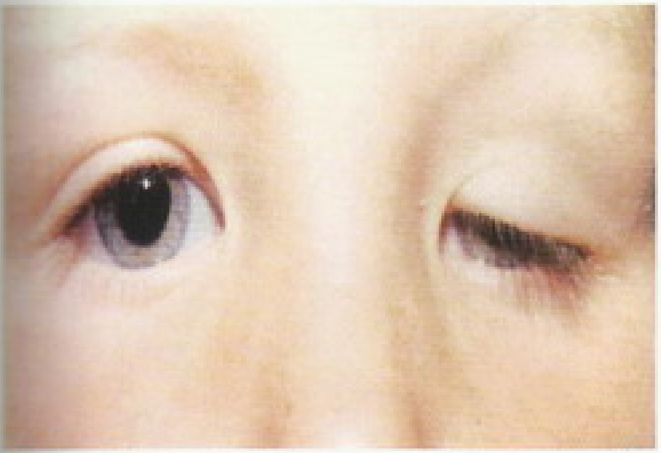
Lid tarsi with Meibomian glands.



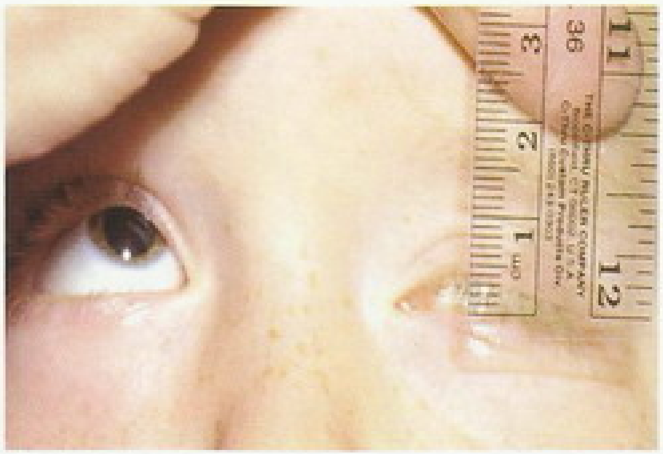
Left ptosis



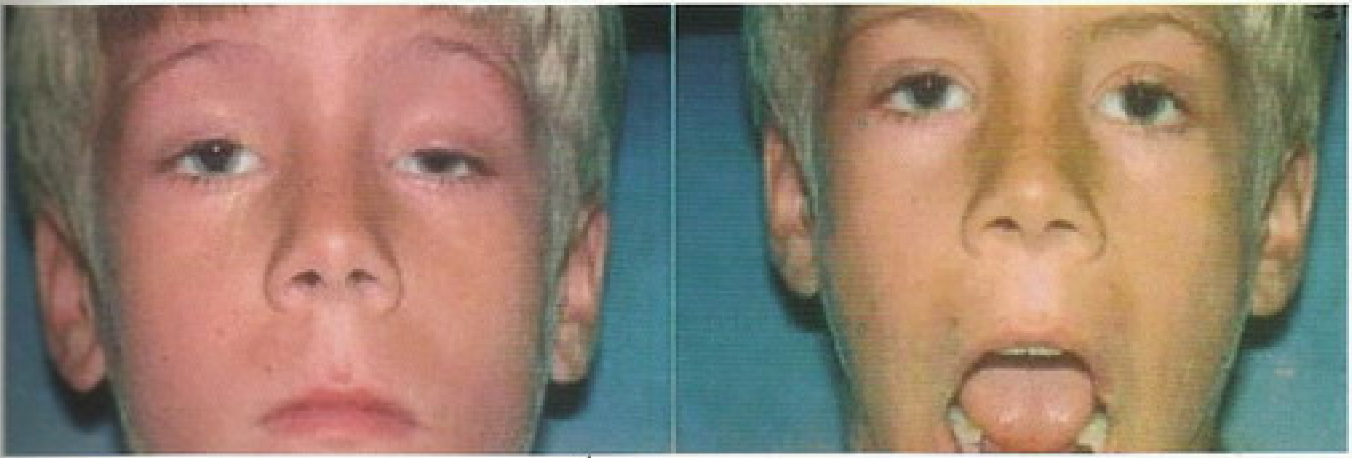
Severe right congenital ptosis (the pupil is covered)



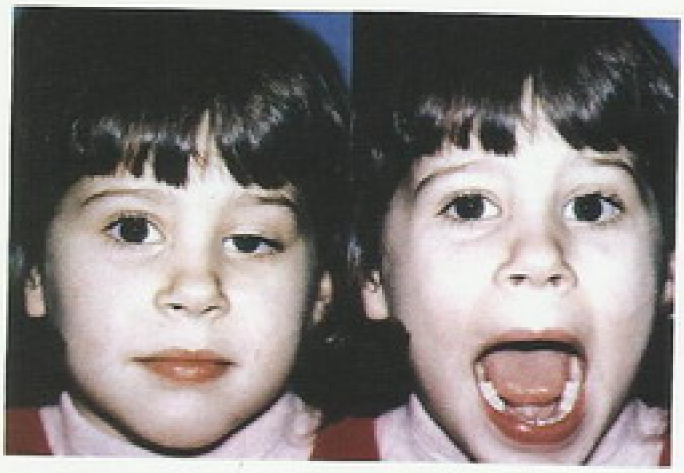
Left congenital ptosis with bilateral epicanthus



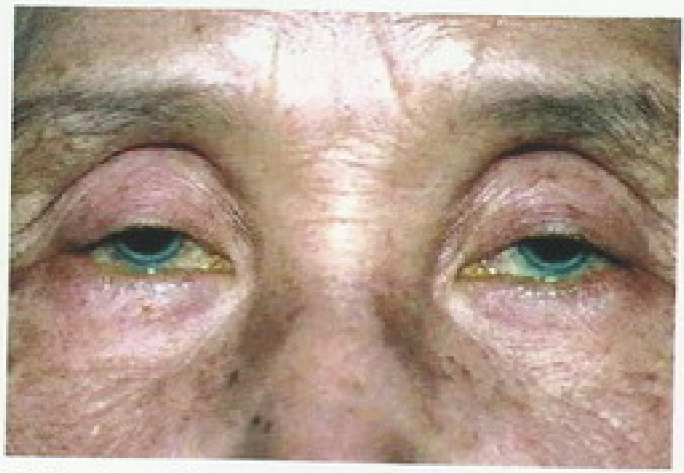
Estimation of levator function



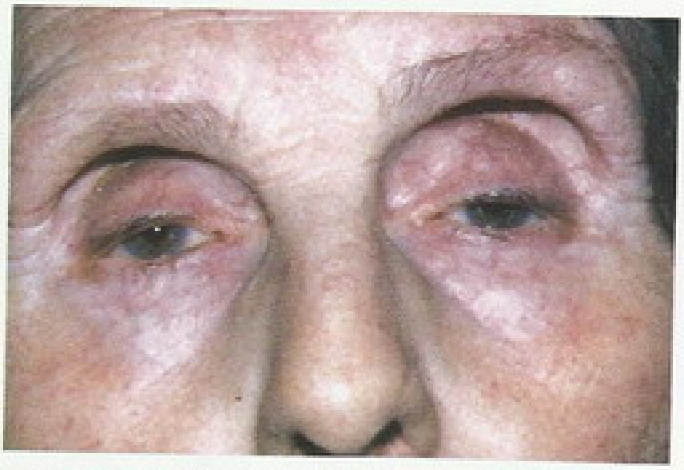
Left Mracus Gunn (jaw - winking syndrome)
the ptosed lid elevates on moving the jaw



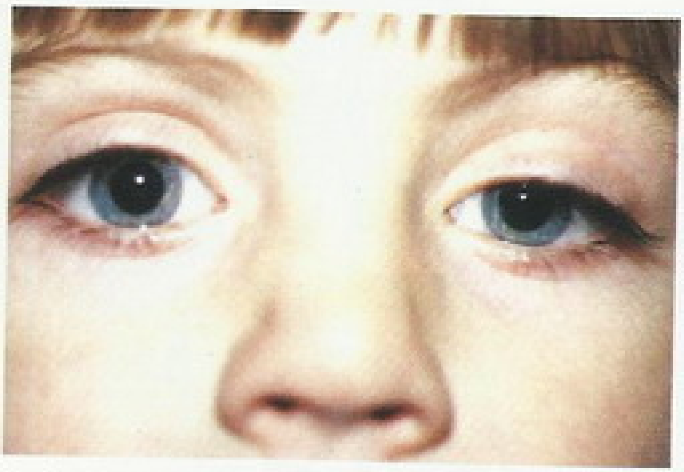
Left Marcus Gunn (jaw-winking syndrome)



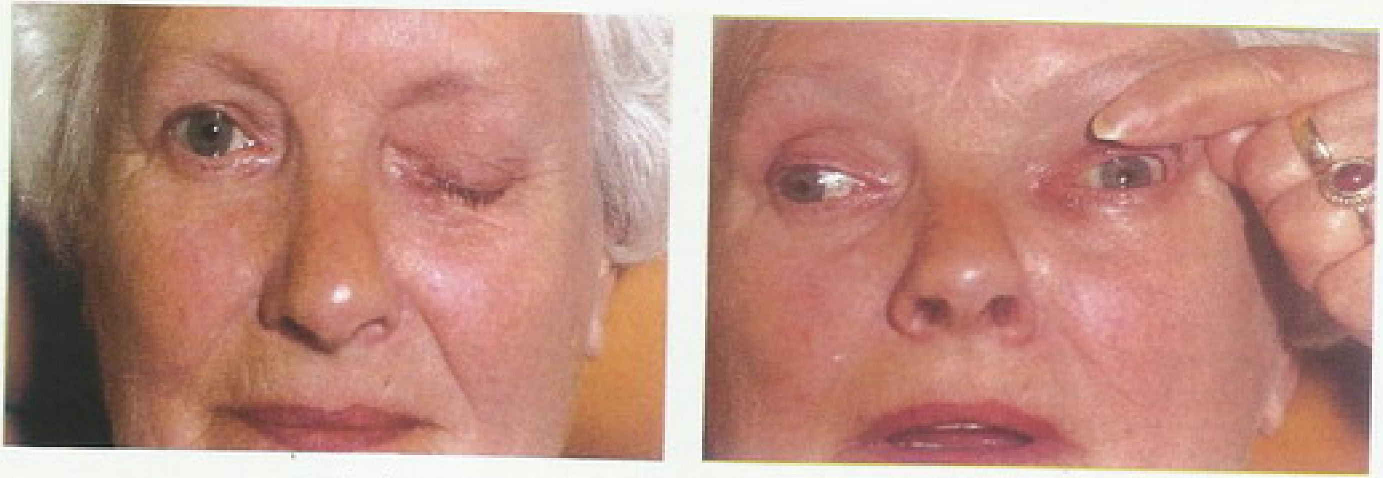
Bilateral senile ptosis with bilateral arcus senillis+ Senile enophthalmos



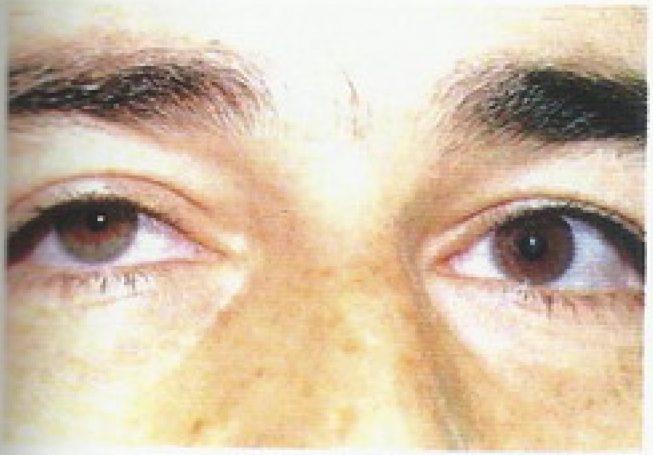
Bilateral senile ptosis+ Senile enophthalmos



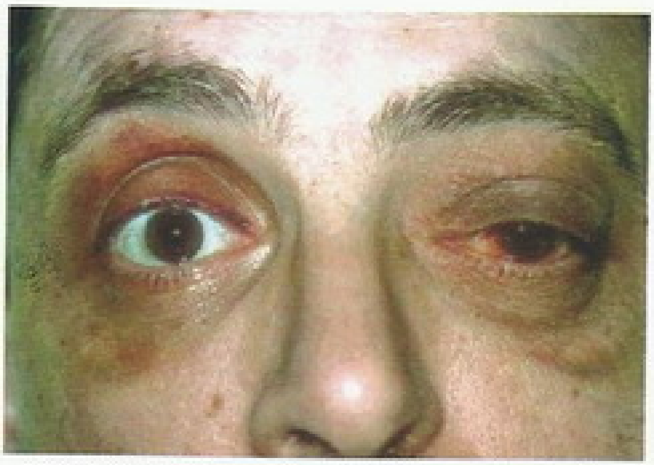
Left mild ptosis with absent lid crease



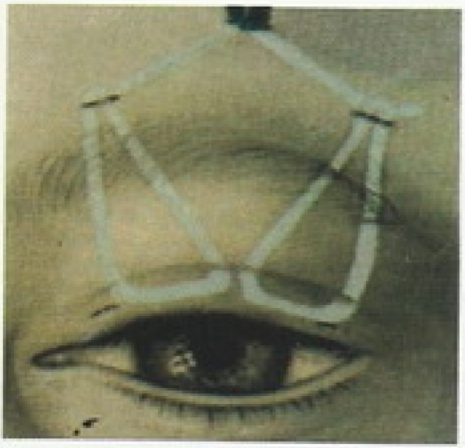
Left severe paralytic ptosis (3rd nerve palsy)



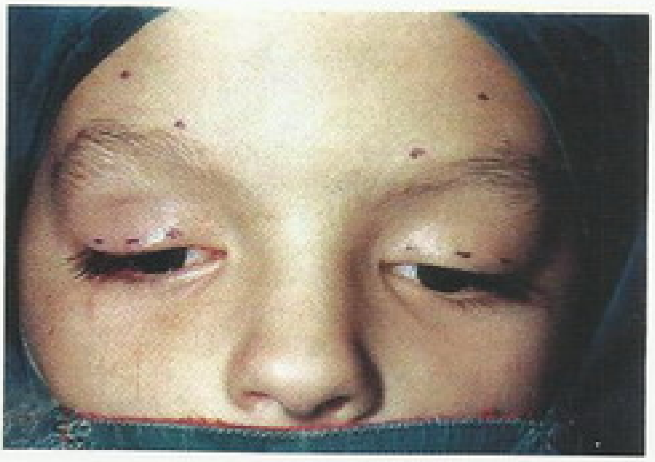
Right Horner syndrome (see partial ptosis & miosis & Hetrerochromia)



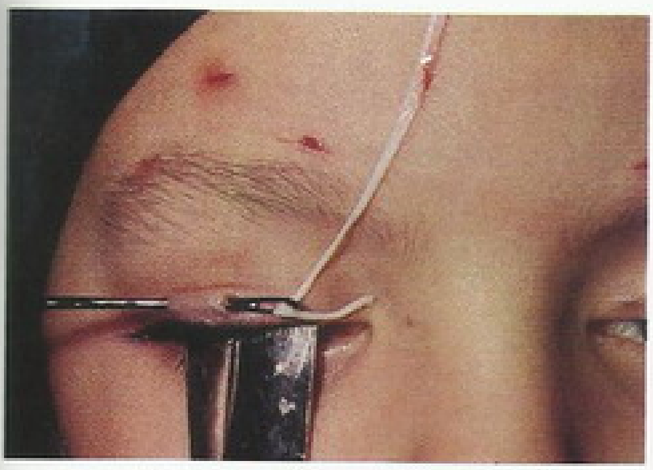
Bilateral lid ecchymosis with left traumatic ptosis



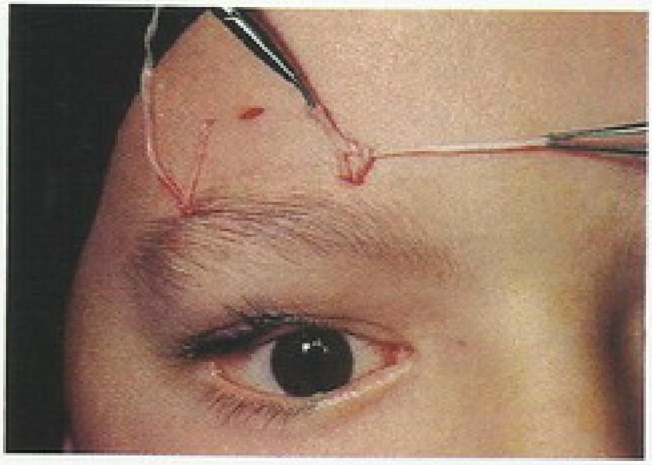
Sling opertation (Hess operation) for ptosis



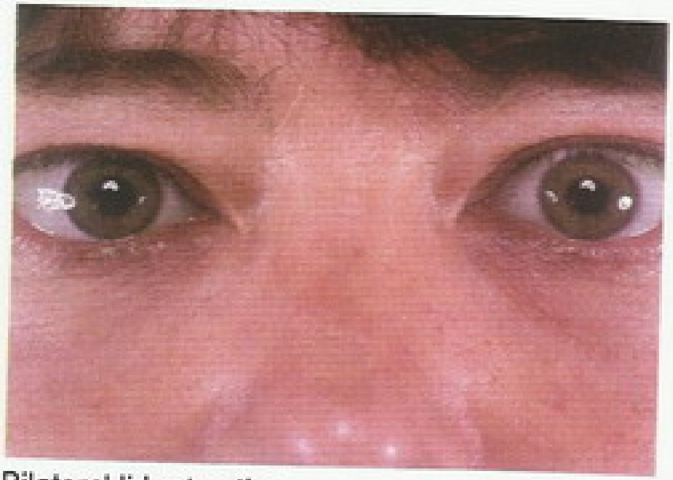
Brow suspension using fascia lata strips



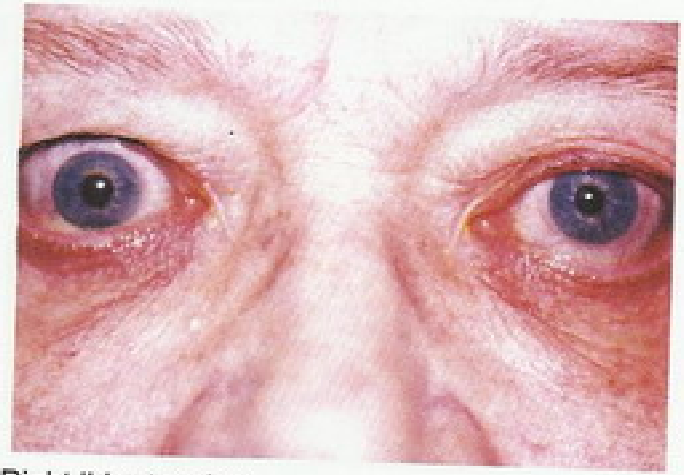
Brow suspension using fascia lata strips



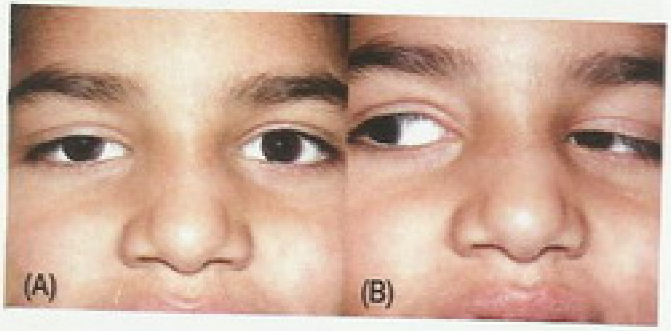
Brow suspension using fascia lata strips



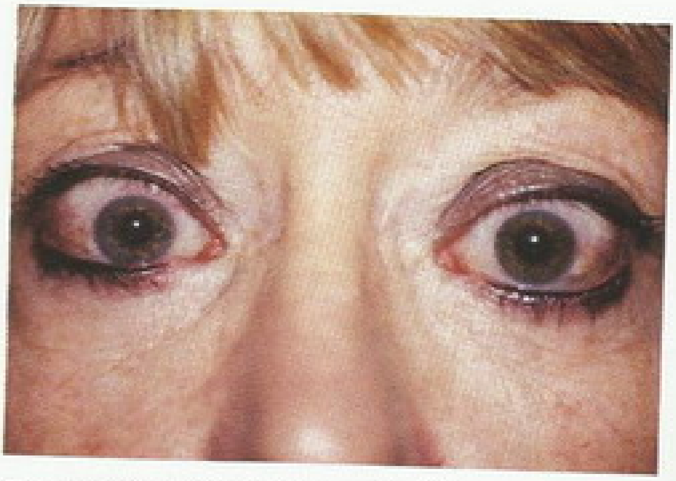
Bilateral lid retraction



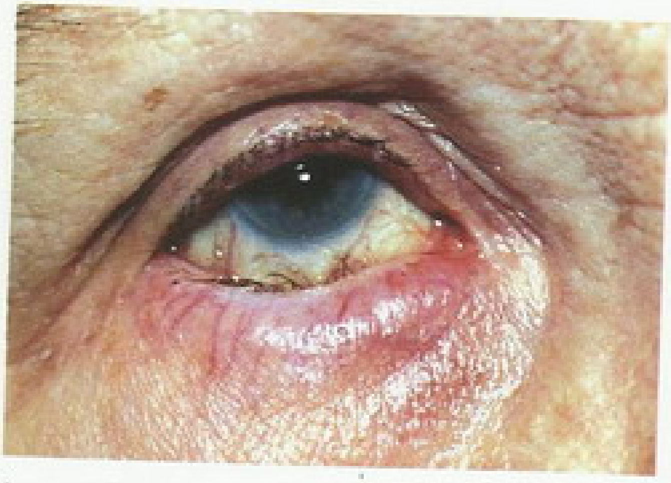
Right lid retraction



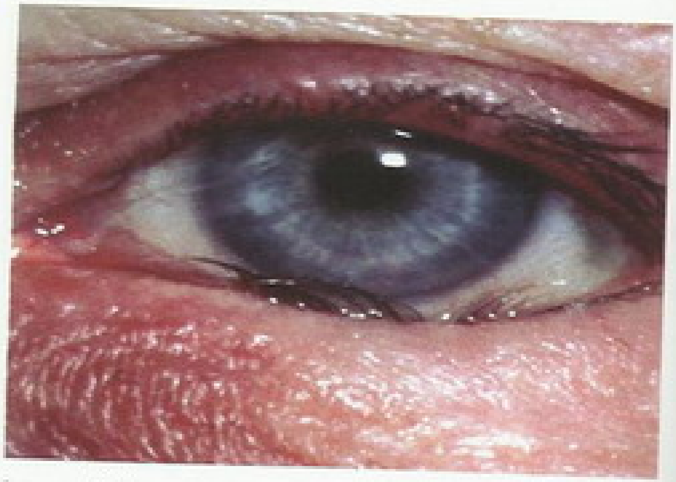
Third nerve misdirection..
(A) Moderate right ptosis
(B) Retraction of the lid on right-gaze



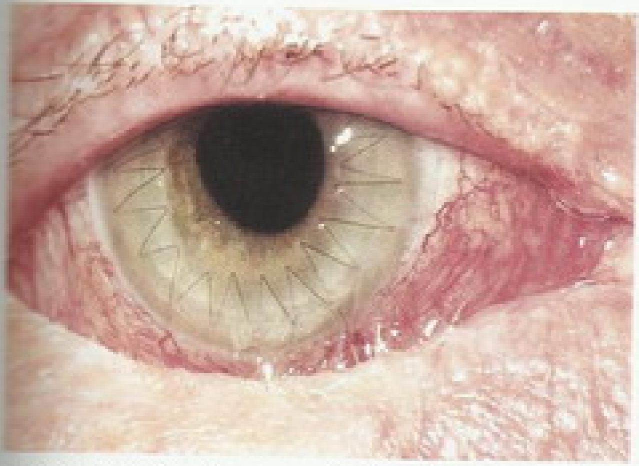
Thyrotoxic exophthalmos with bilateral lid retraction



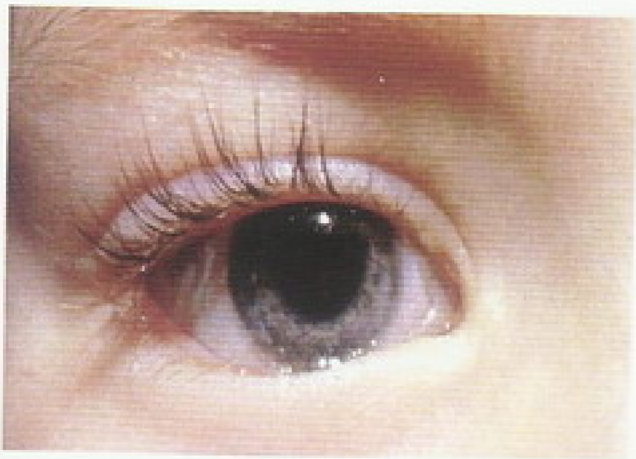
Lower lid involutional entropion



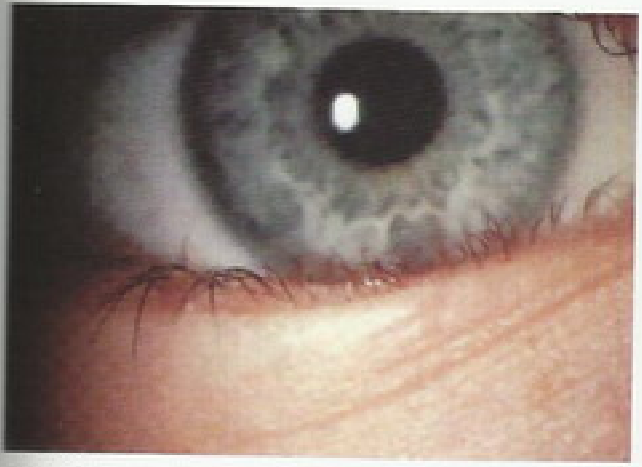
Lower lid involutional entropion



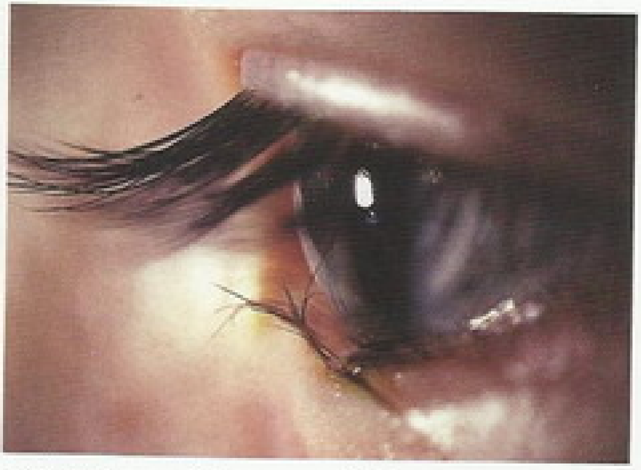
Lower lid entropion, penetrating keratoplasty + red eye.



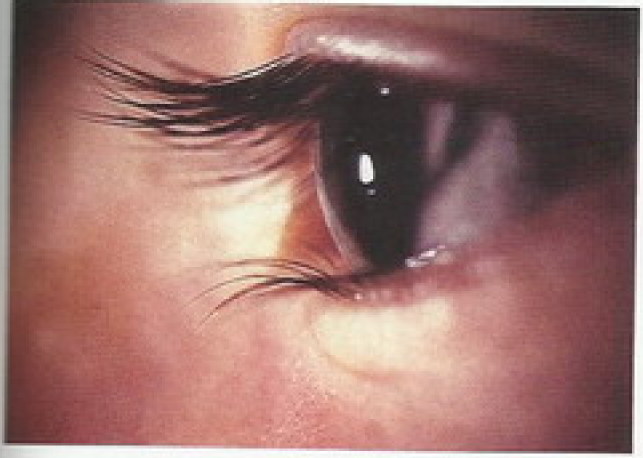
Lower lid congenital entropion



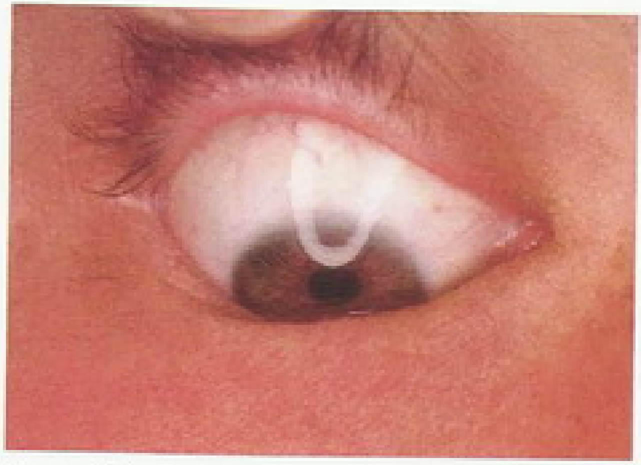
Epiblepharon (extra raw of skin across the lid margin makes the lashes directed vertically, usually affects the medial aspect.
DD from congenital entropion



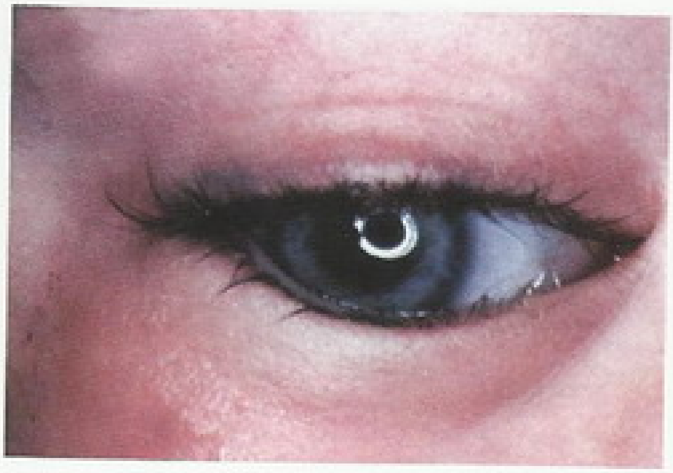
Epiblepharon (extra raw of skin across the lid margin makes the lashes directed vertically, DD from entropion)



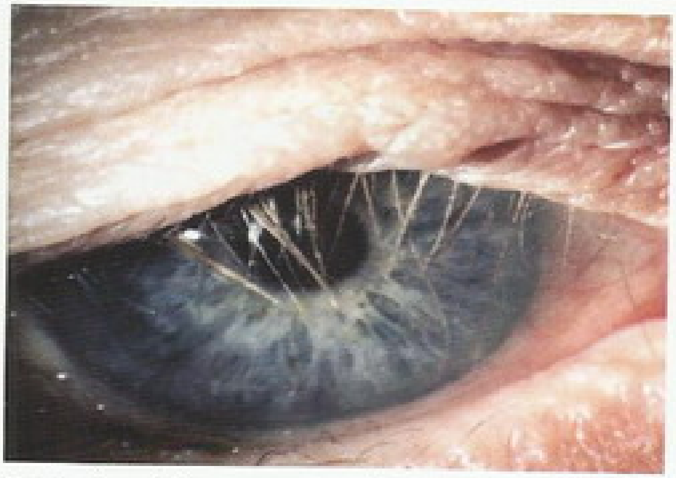
Epiblepharon following manual correction



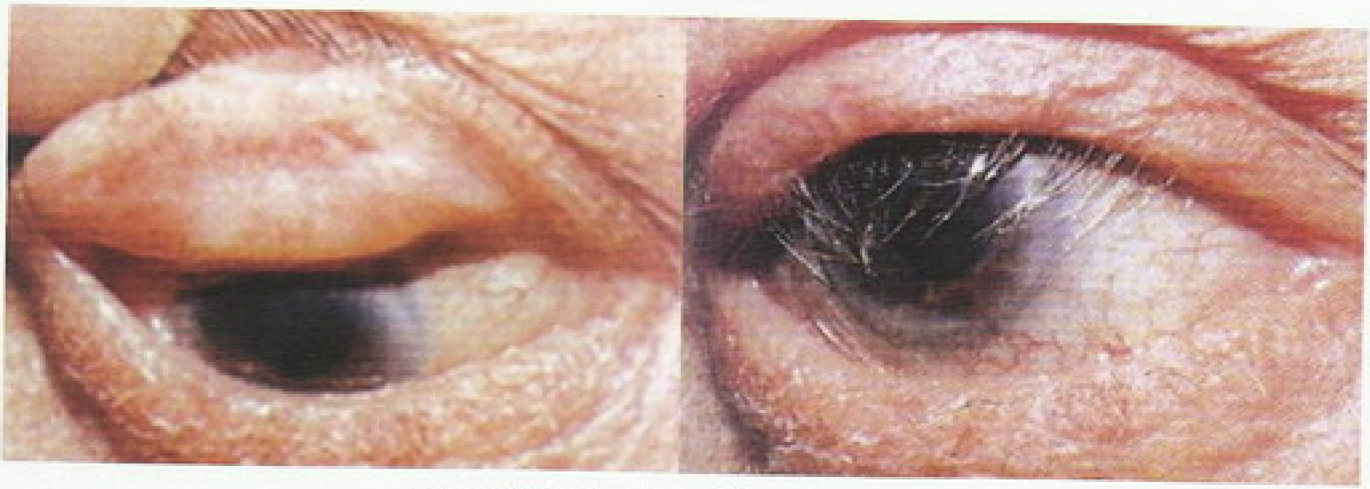
Lower lid entropion



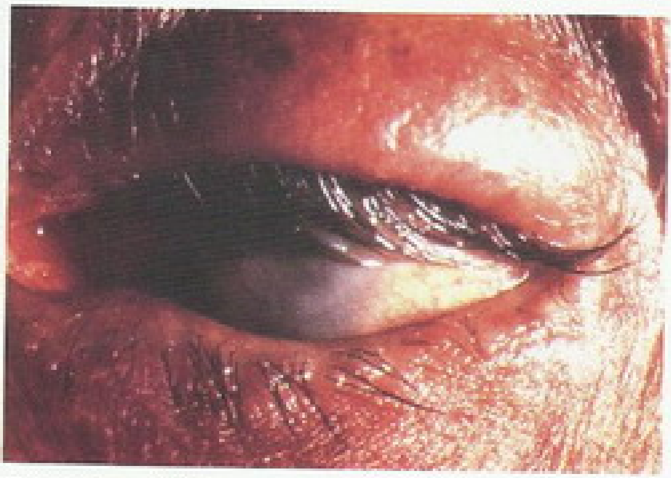
Entropion of the lower eyelid



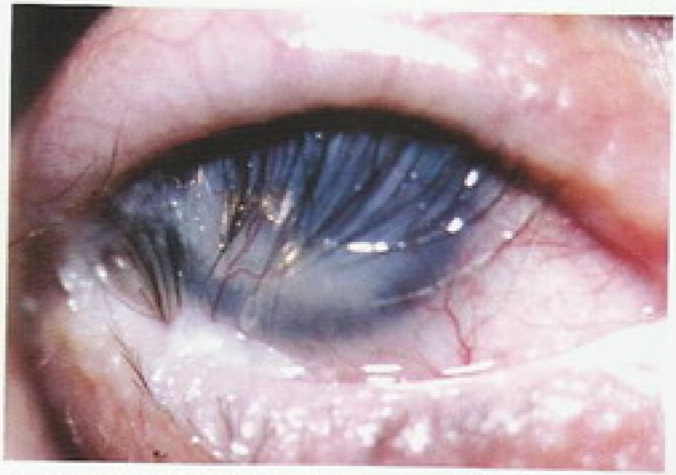
Entropion of the upper eyelid



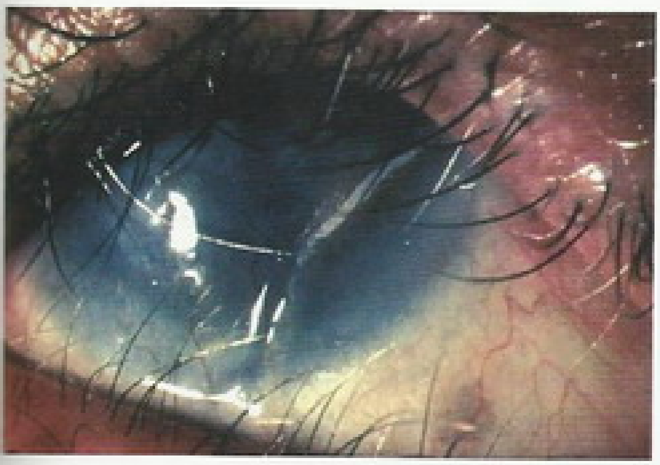
Cicatricial entropion of the upper eyelid



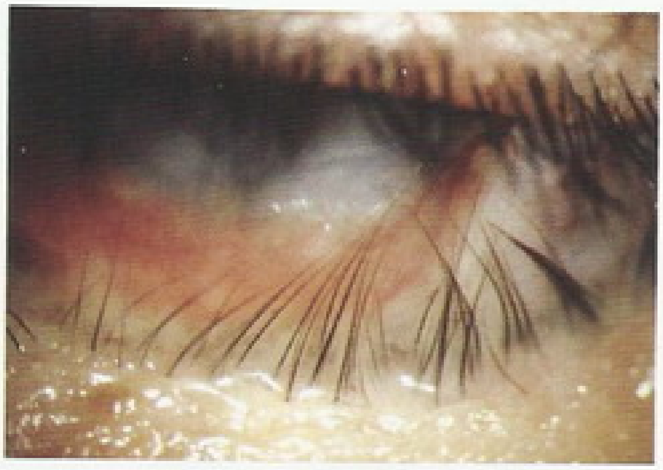
Entropion of the upper eyelid + corneal opacity (in advanced trachoma)



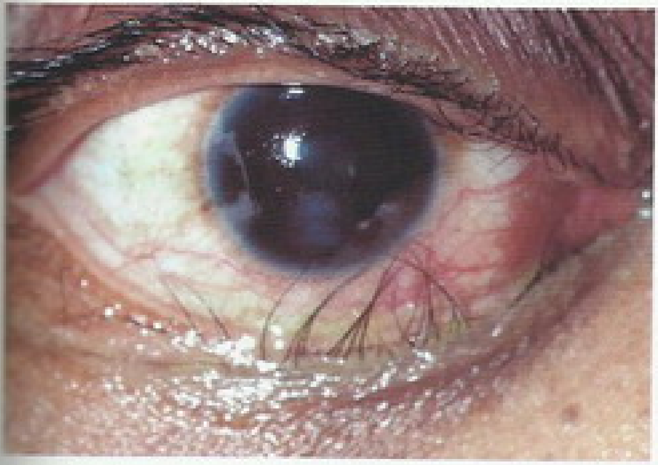
Cicatricial entropion of the upper lid + hazy cornea



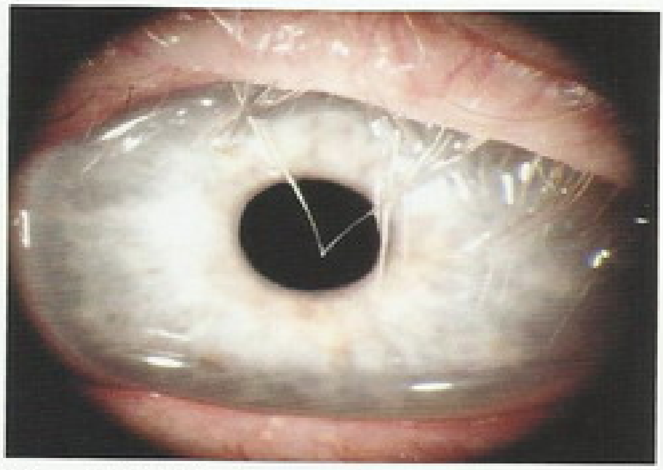
Trichiasis: more than 4 maldirected lashes



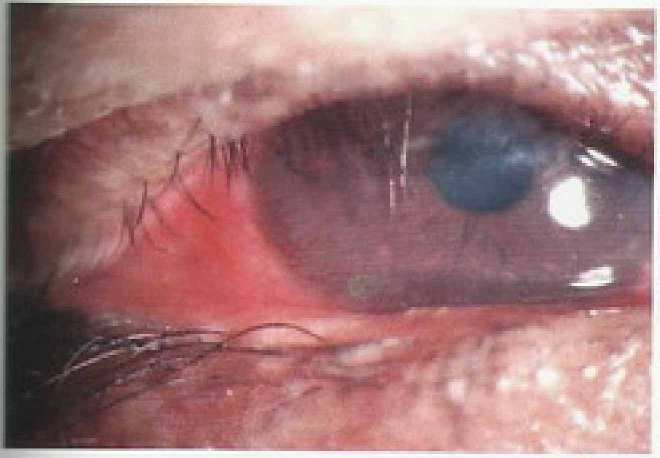
Trichiasis



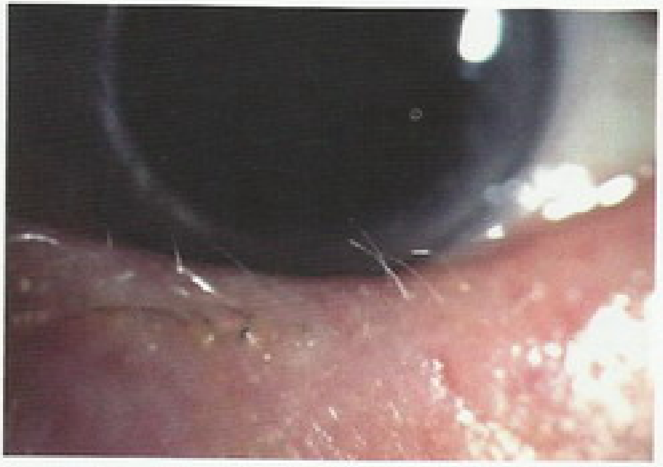
Trichiasis



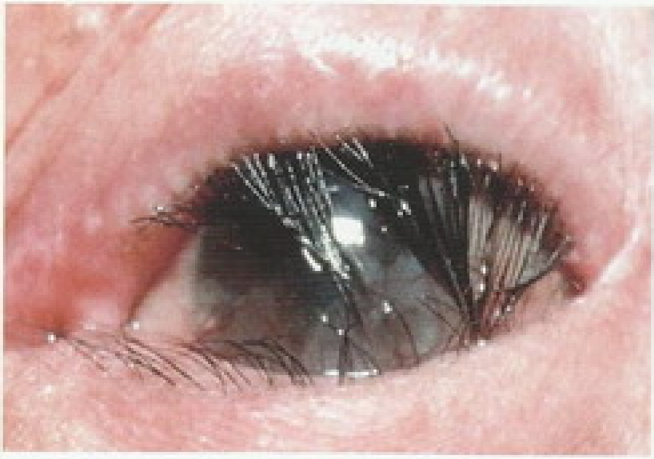
Upper lid trichiasis



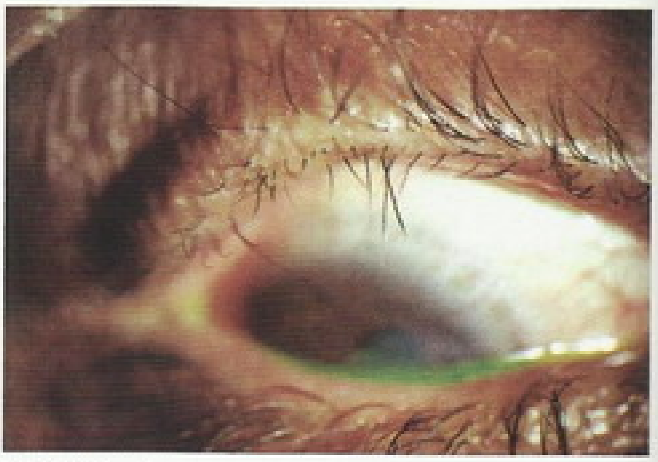
Upper lid trichiasis



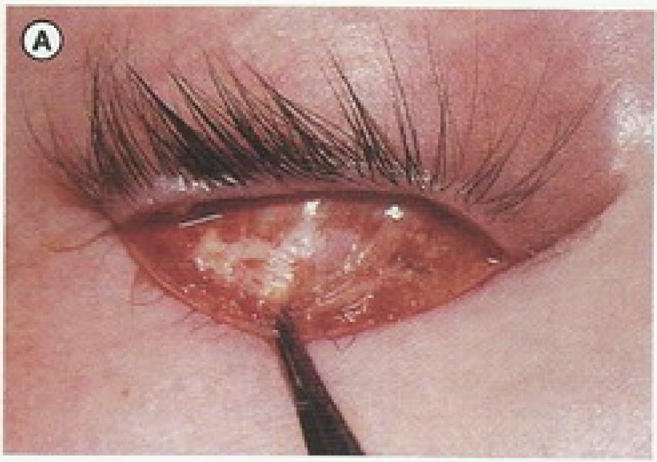
lower lid trichiasis



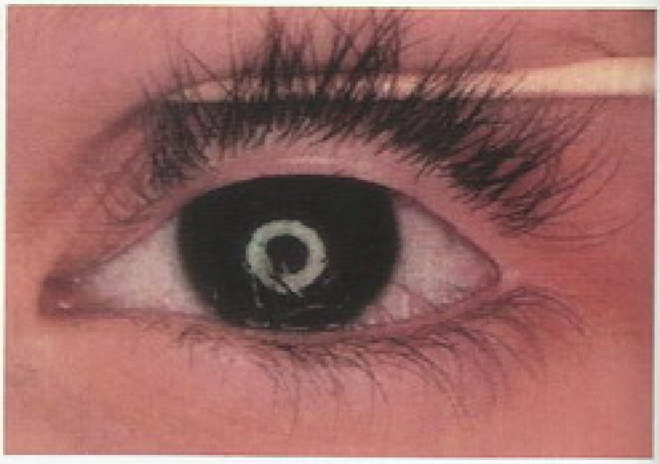
Upper & lower lid trichiasis with vascularized corneal scar & ankyloblepharon



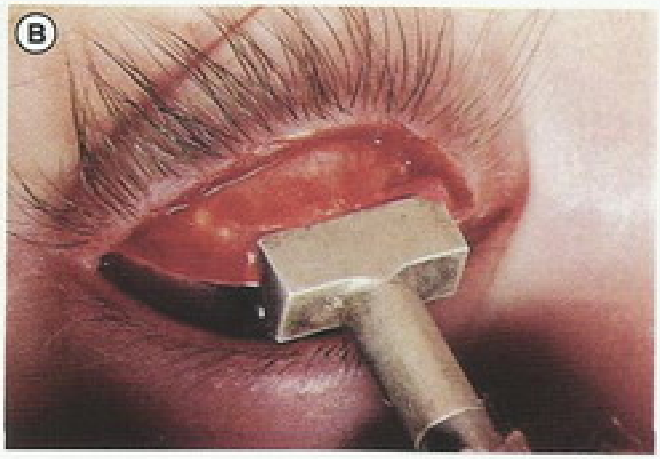
Distichiasis:extra raw of maldirected lashes in the position of openings of rudimentary meibomian glands



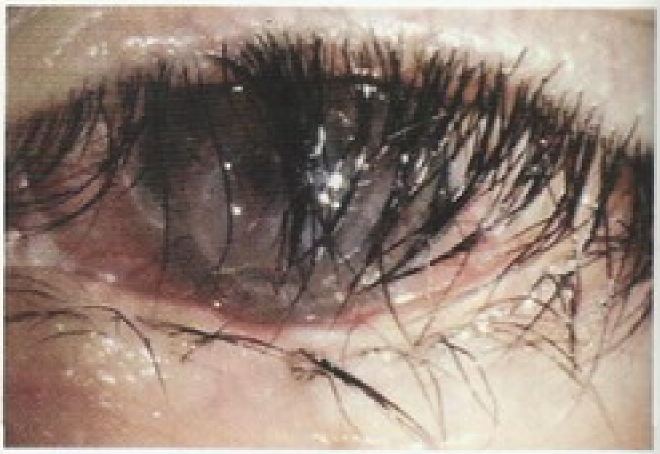
Distichiasis treated with lamellar division with cryotherapy to the post. lamellae



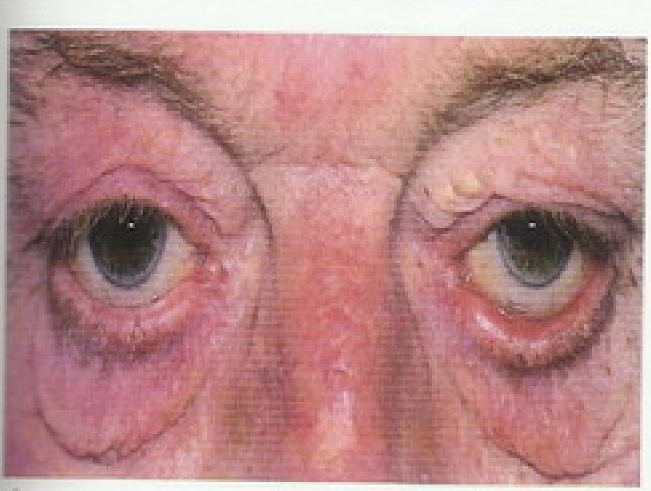
Distichiasis:extra raw of maldirected lashes in the position of openings of rudimentary meibomian glands



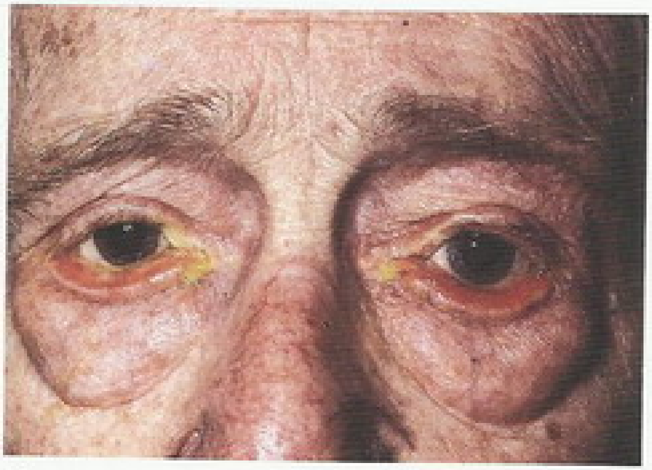
Distichiasis treated with lamellar division with cryotherapy to the post. lamellae



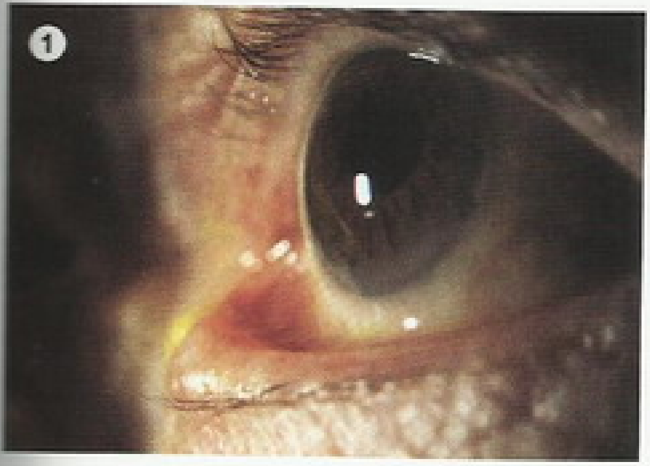
Trichomegaly (excessive eye lashes growth)



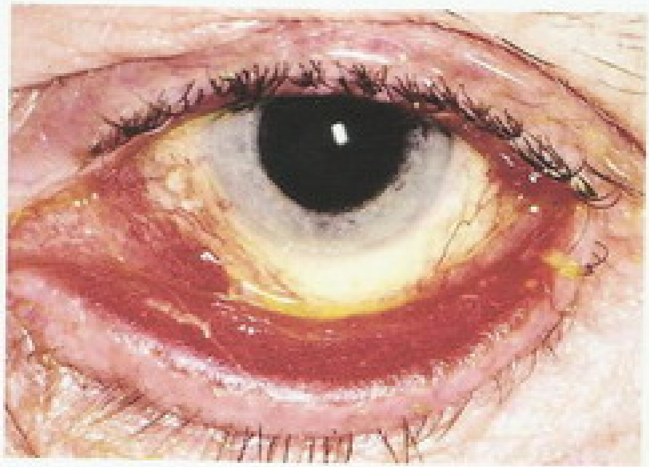
Bilateral Senile ectropion



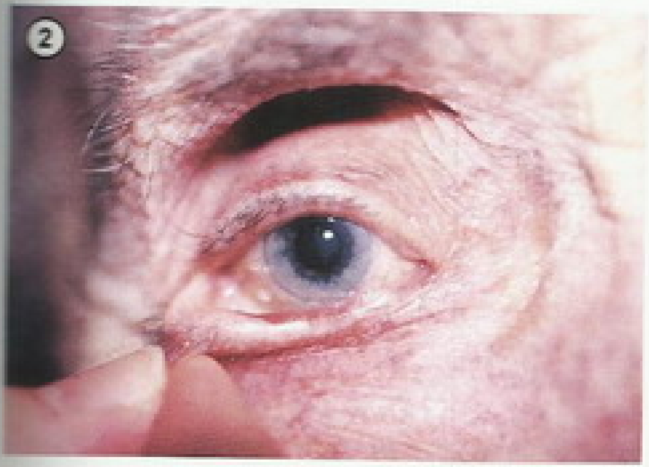
Bilateral Senile ectropion



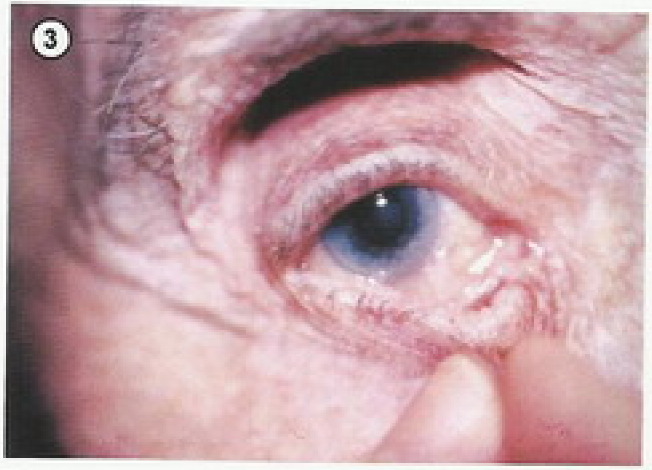
Mechanisms of involutonal (senile) ectropion:
1 - horizontal lid laxity



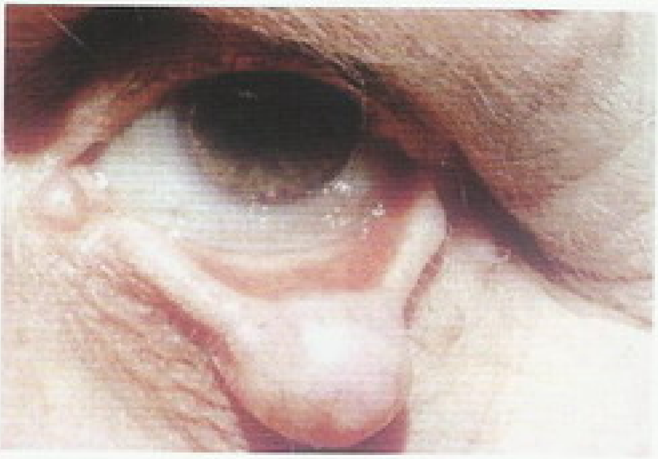
Severe ectropion



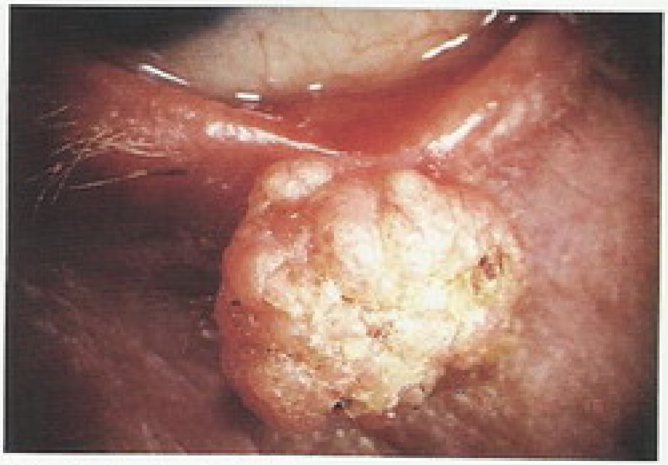
Mechanisms of involutonal (senile) ectropion:
2 - Medial canthal laxity.



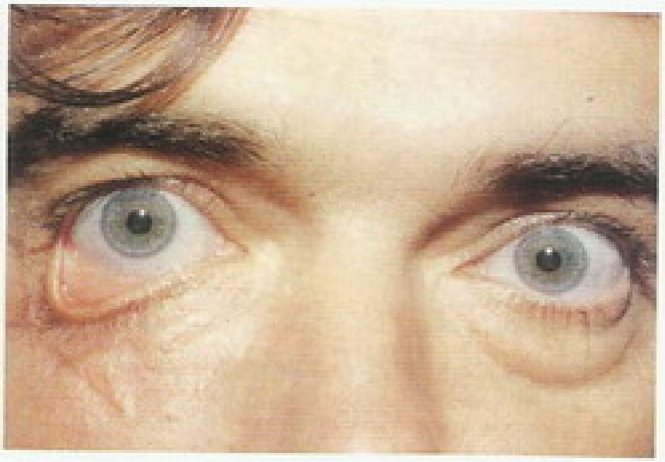
Mechanisms of involutonal (senile) ectropion:
3 - Lateral canthal tendon laxity.



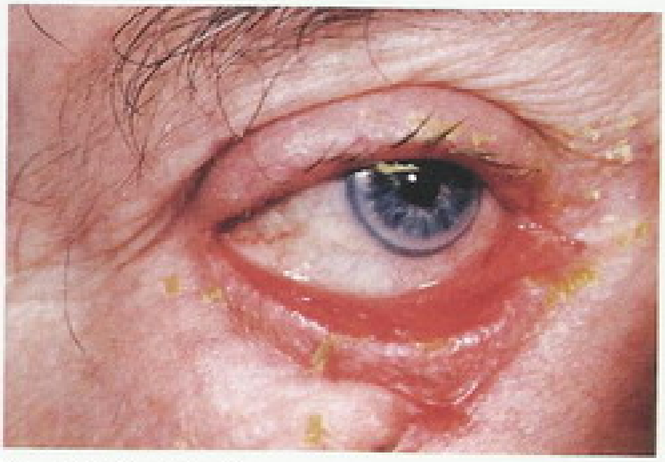
Mechanical ectropion.. due to increase weight of lower lid by lid mass



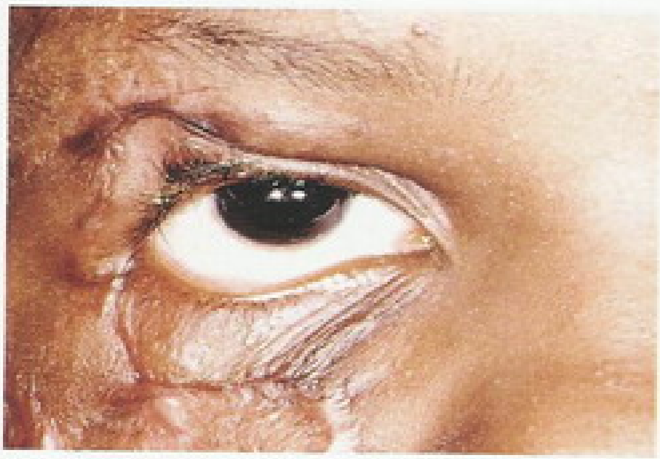
Mechanical ectropion



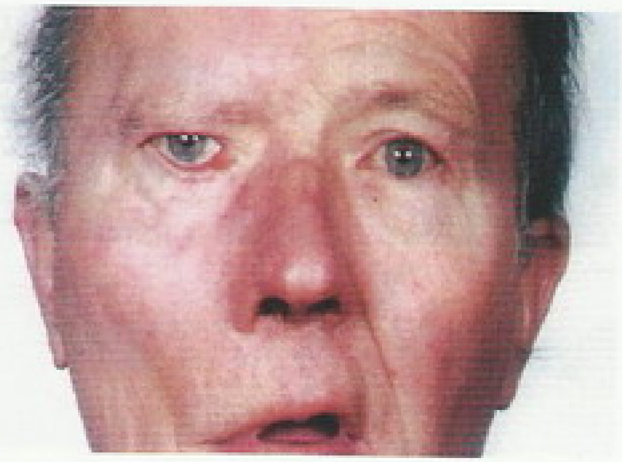
Right cicatricial ectropion



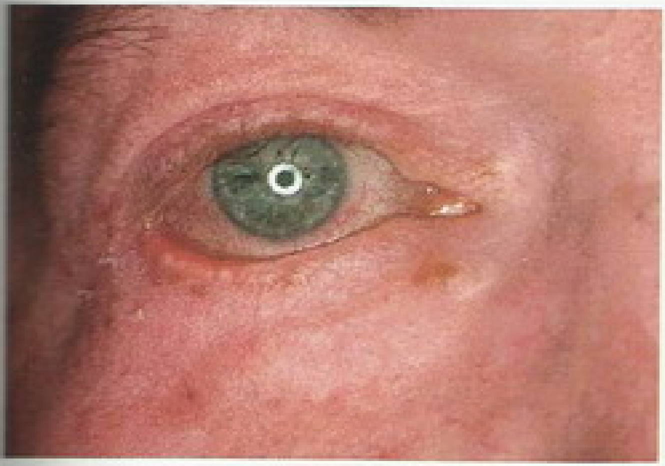
Cicatricial ectropion



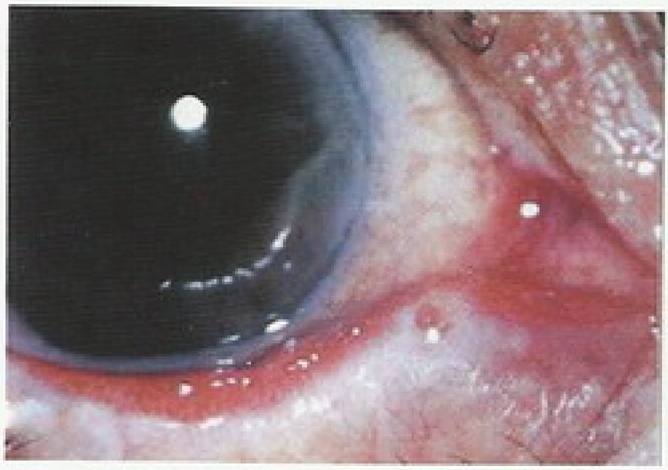
Cicatricial ectropion



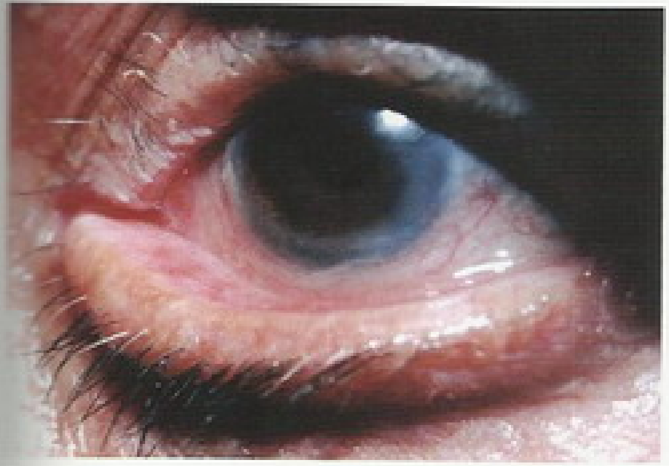
Right facial nerve palsy with paralytic ectropion



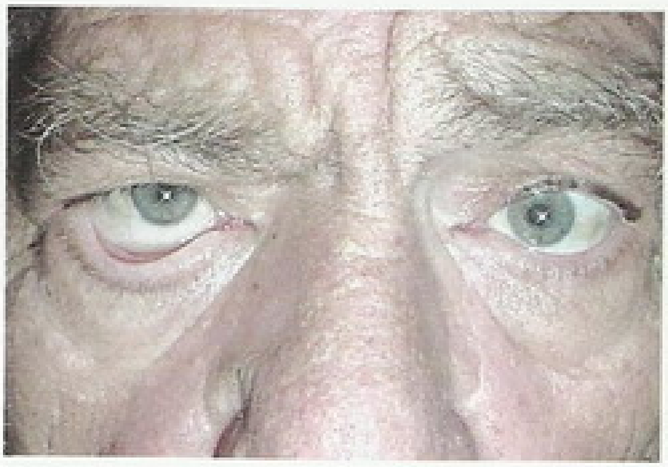
Mild ectropion



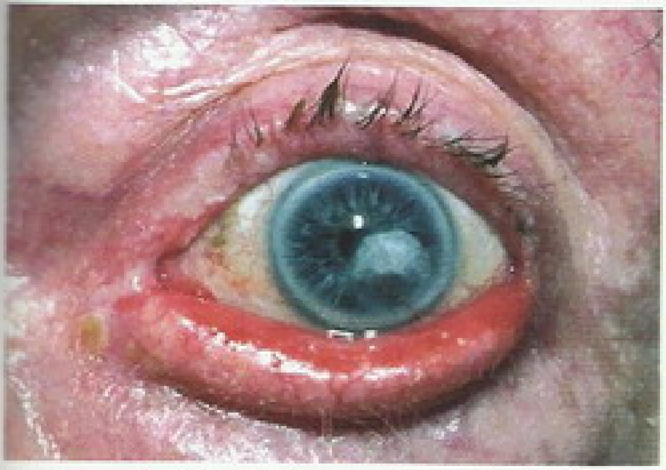
Ectrpion (the punctum is visible without lid eversion)



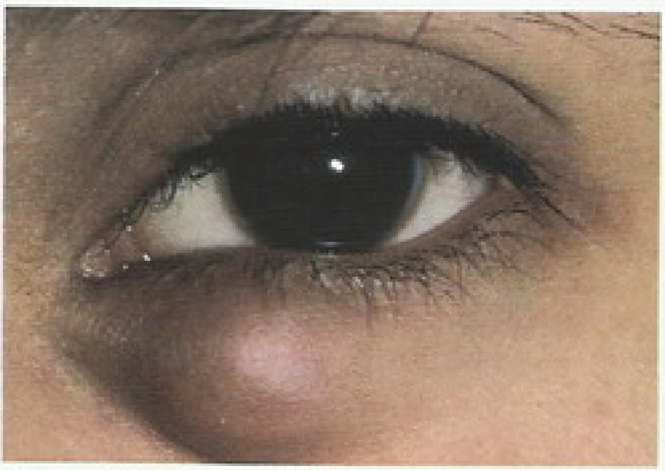
Severe ectropion



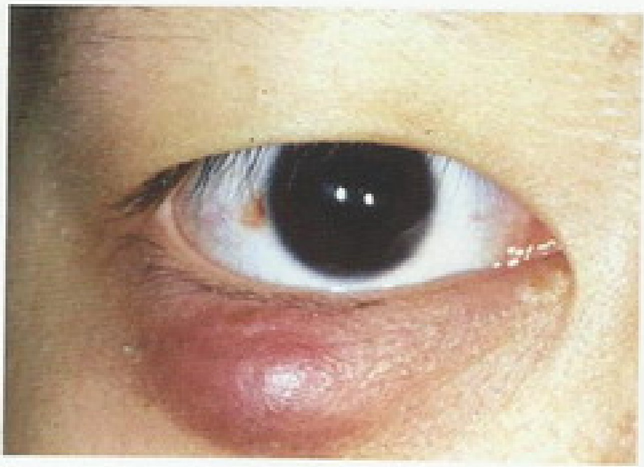
Severe ectropion



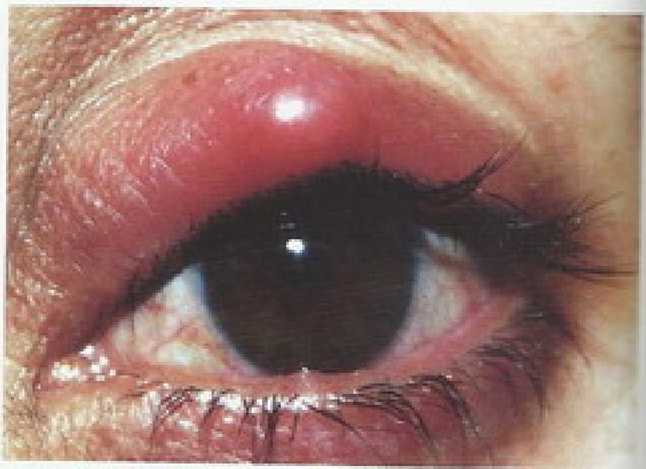
Severe ectropion with corneal opacity and arcus senillis



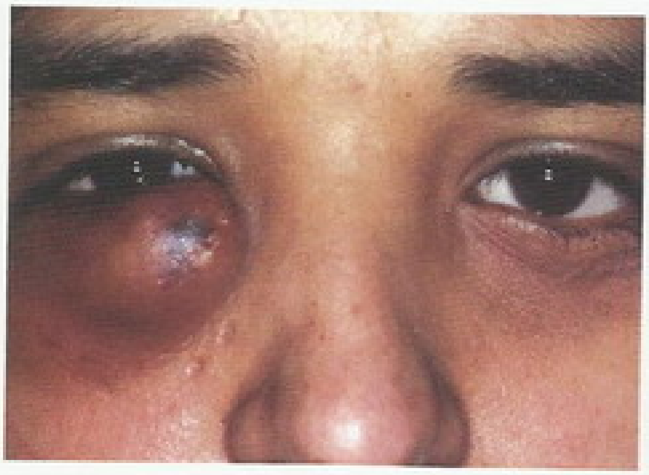
Lower lid chalazion



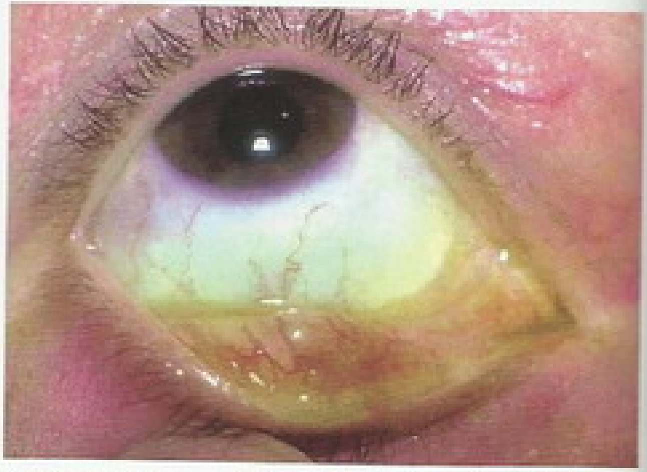
Lower lid chalazion



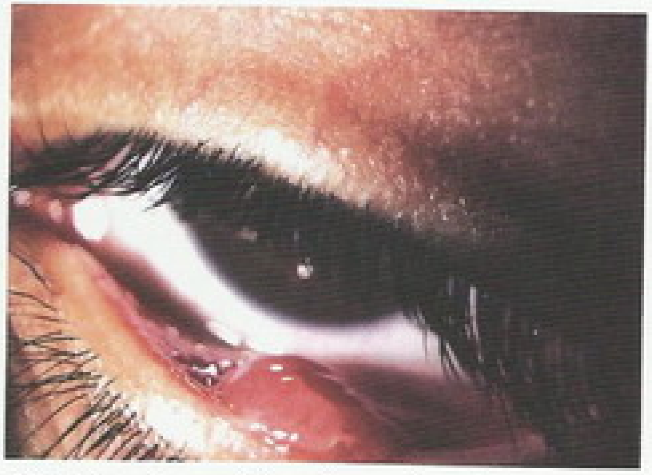
Upper lid infected chalazion (Hordeolum internum)



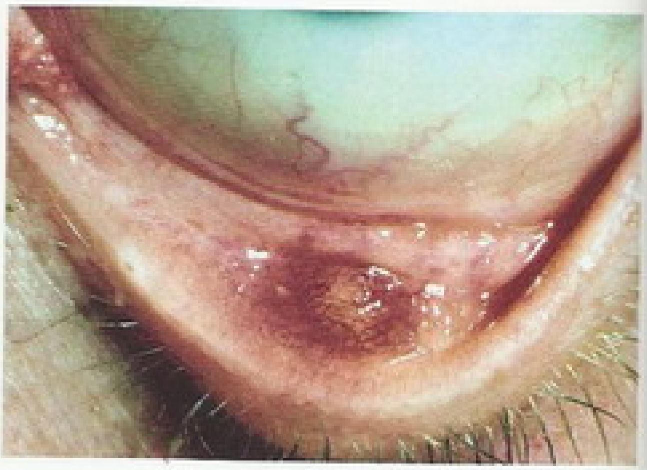
Lower lid infected chalazion (Hordeolum internum)



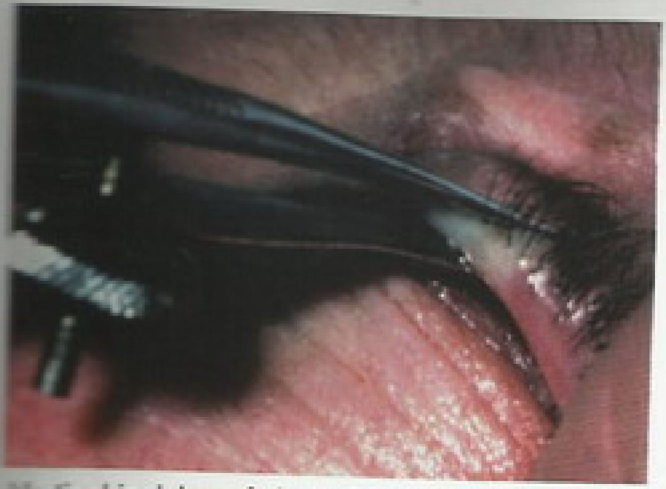
Chalazion is seen from the conjunctival side



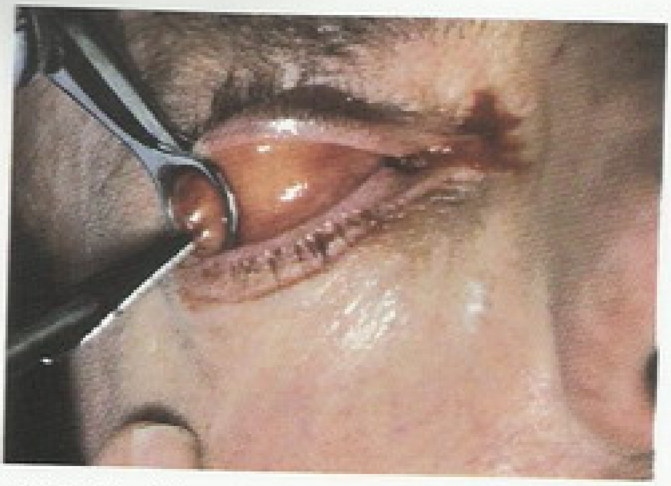
Chalazion is seen from the conjunctival side (conjunctival granuloma)



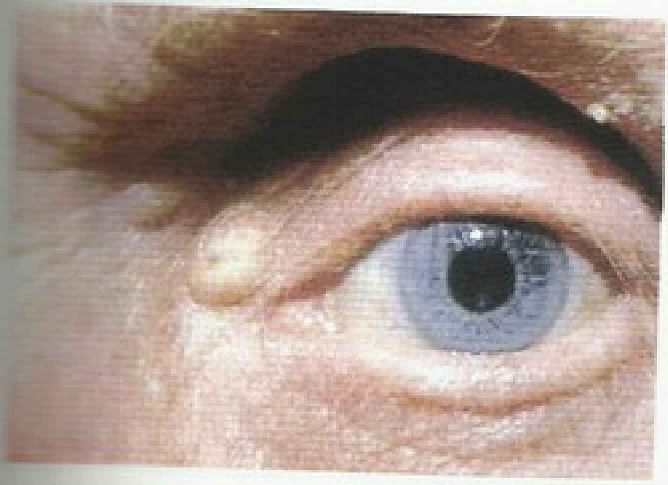
Chalazion is seen from the conjunctival side



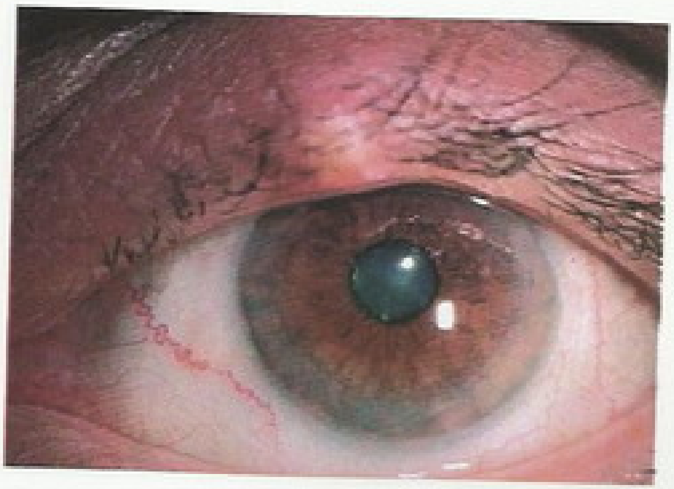
Vertical incision of chalazion



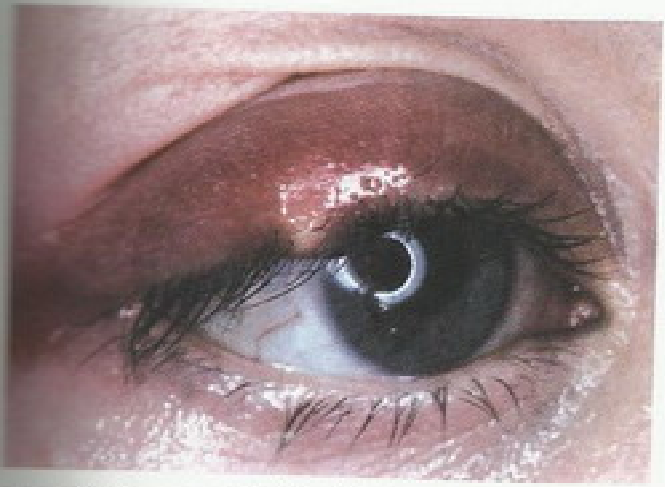
Vertical incision of chalazion



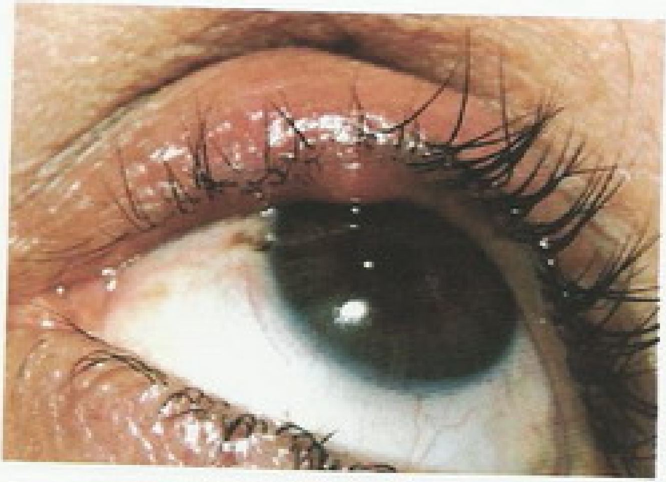
Sebaceous cyst at inner canthus



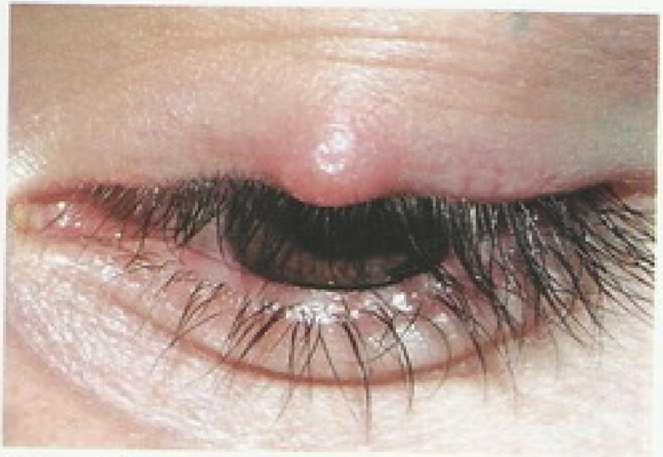
Stye of the upper lid (Hordeolum externum)



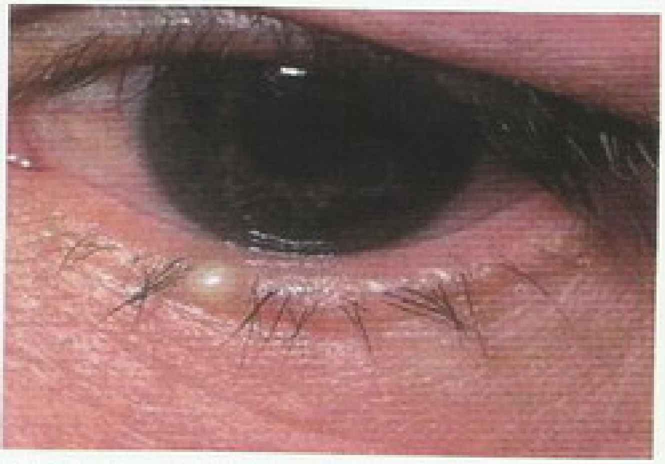
Stye of the upper lid (Hordeolum externum)



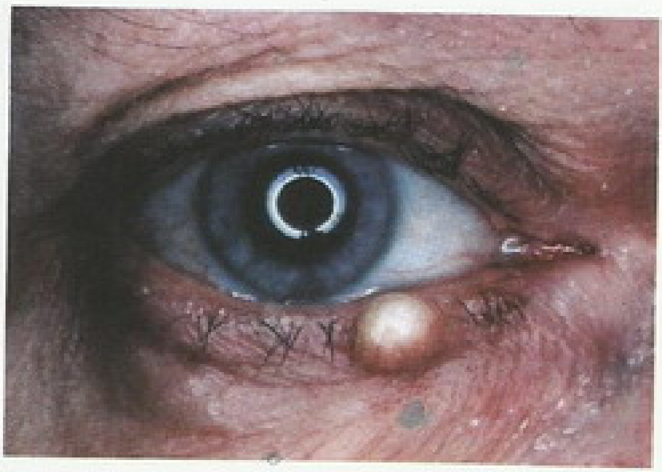
Stye of the upper lid (Hordeolum externum)



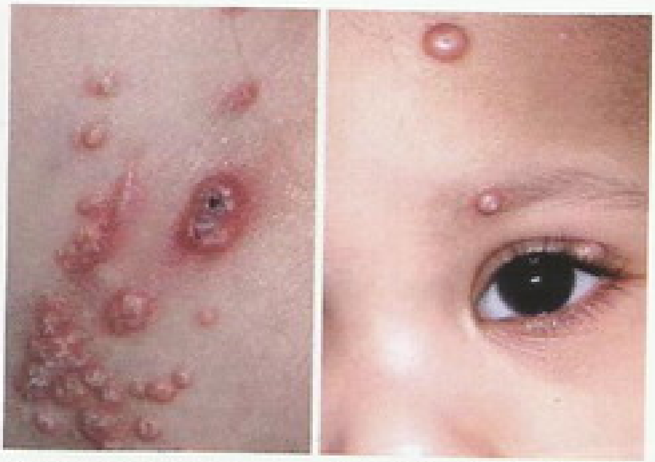
Stye of the upper lid (Hordeolum externum)



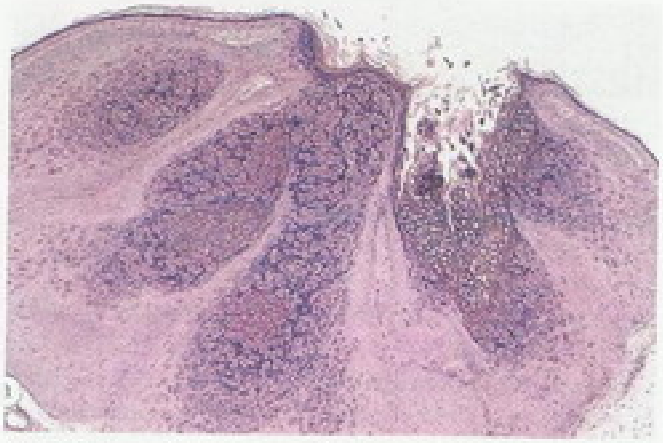
Cyst of Zies galnd



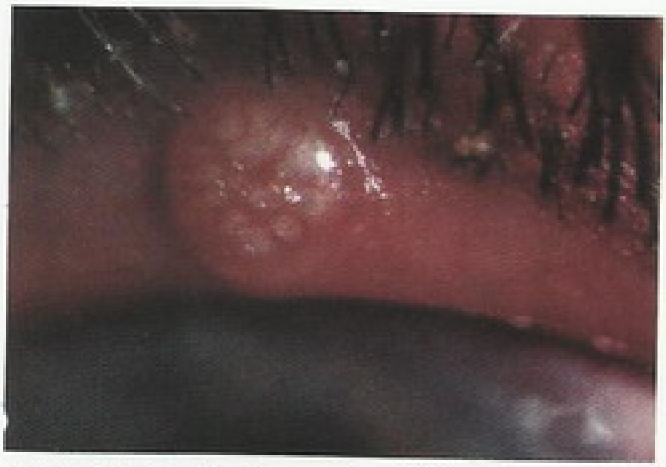
Cyst of Zies gland



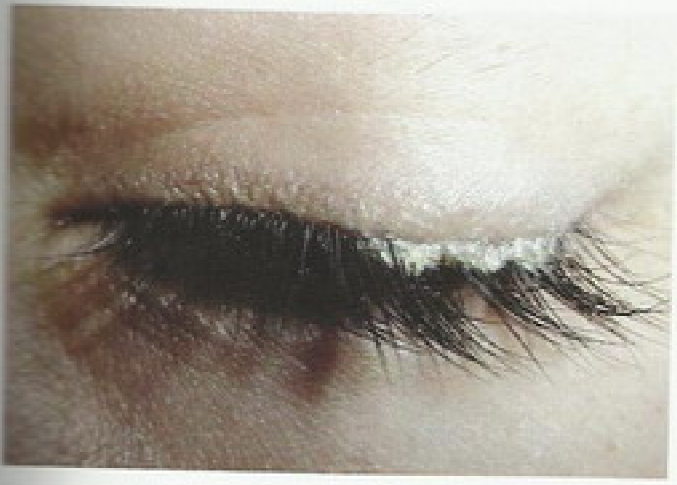
Molluscum contagiosum (umbilicated nodules)



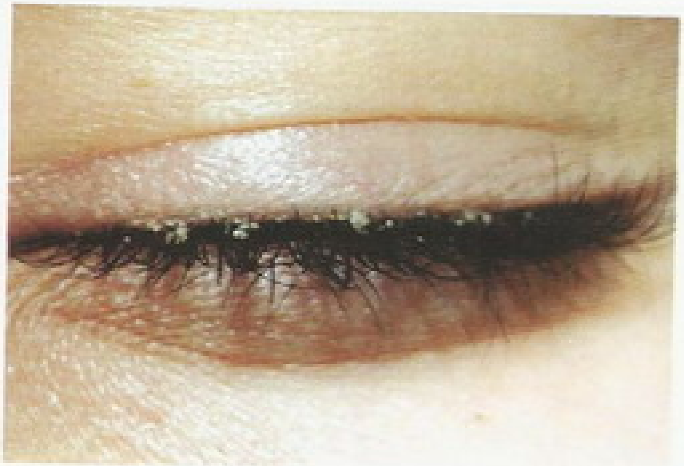
Histology of molluscum (pit
& molluscum bodies)



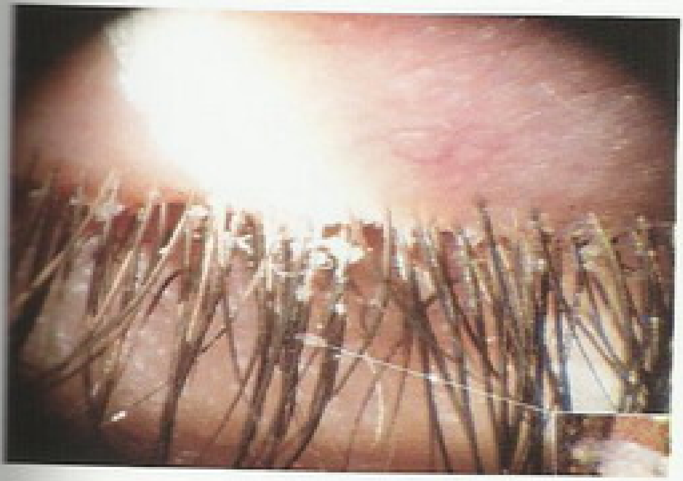
Molluscum contagiosum (umbilicated nodules)



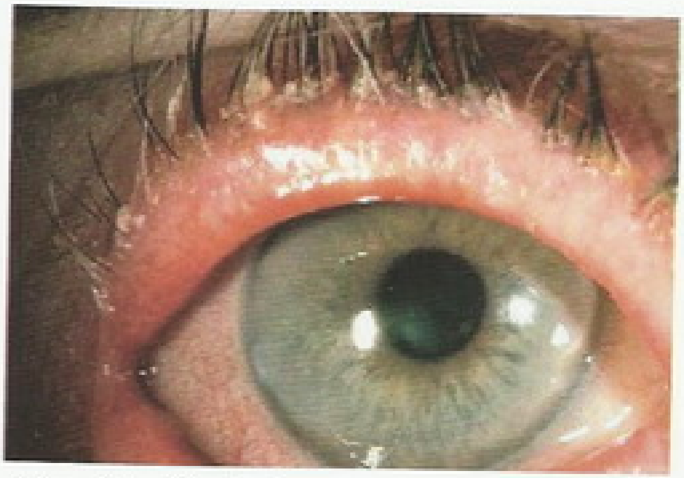
Squamous (scaly) blepharitis



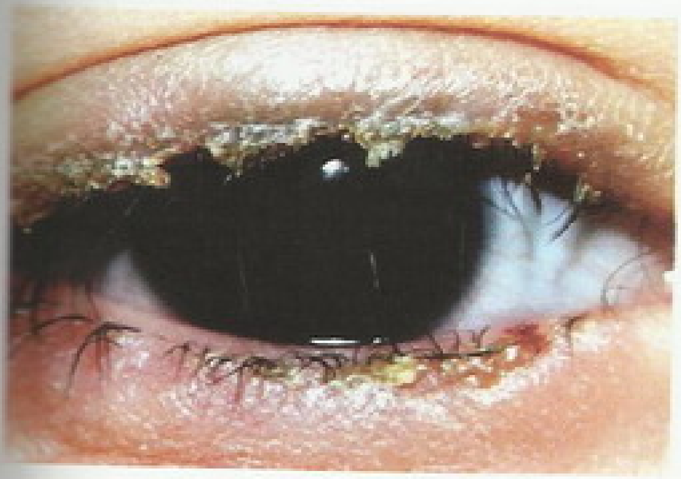
Squamous (scaly) blepharitis



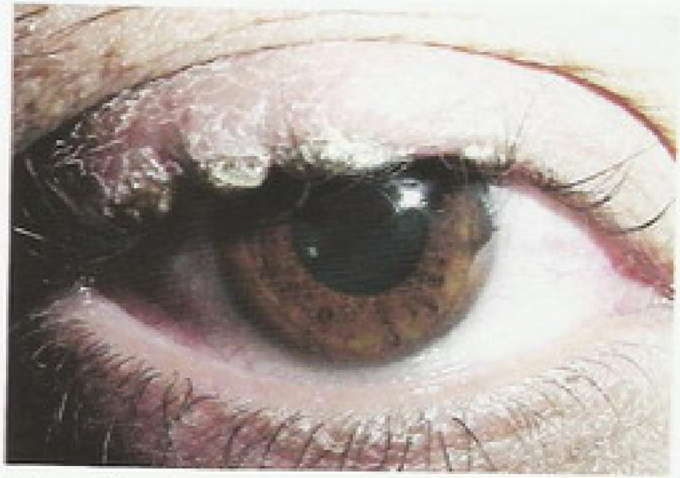
Squamous (scaly) blepharitis



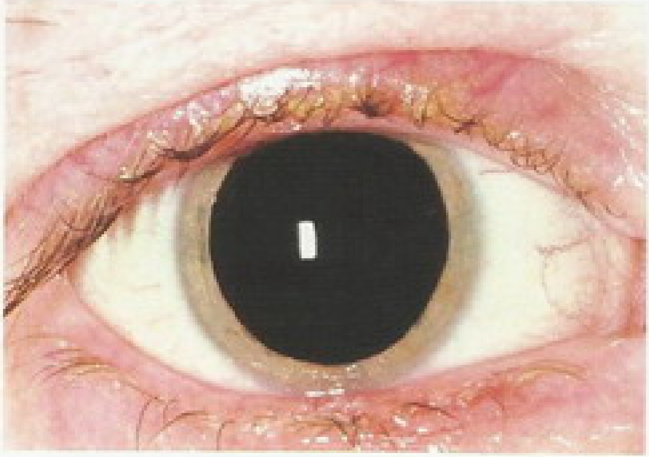
Ulcerative blepharitis



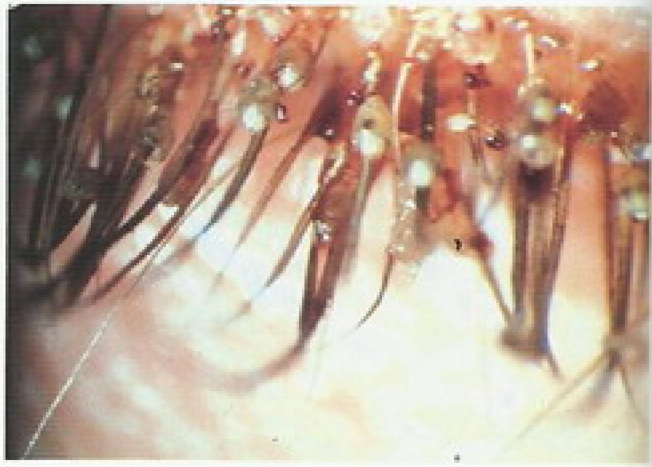
Ulcerative blepharitis



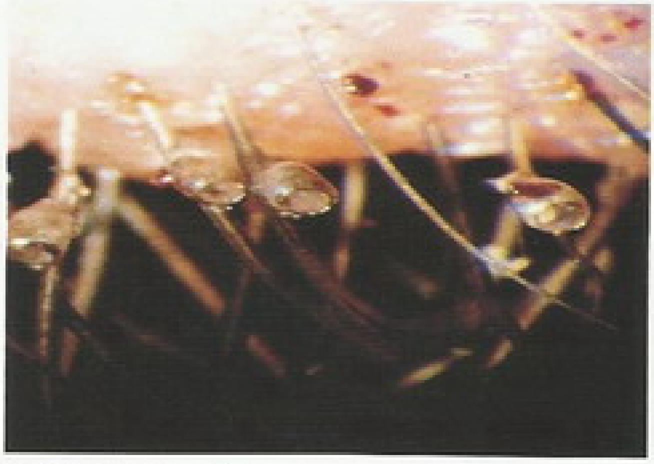
Ulcerative blepharitis



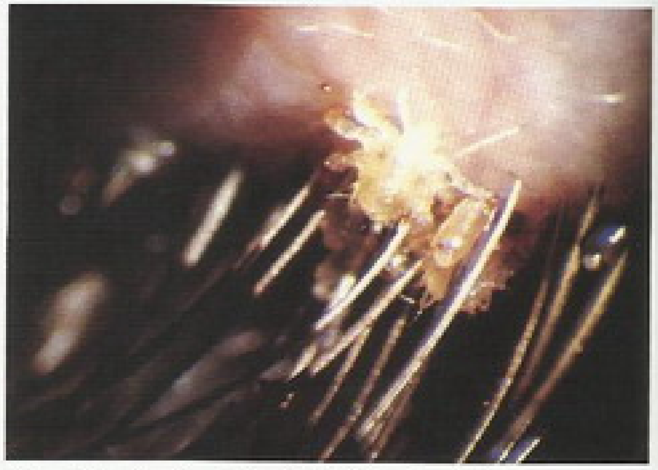
Ulcerative blepharitis + mydriasis



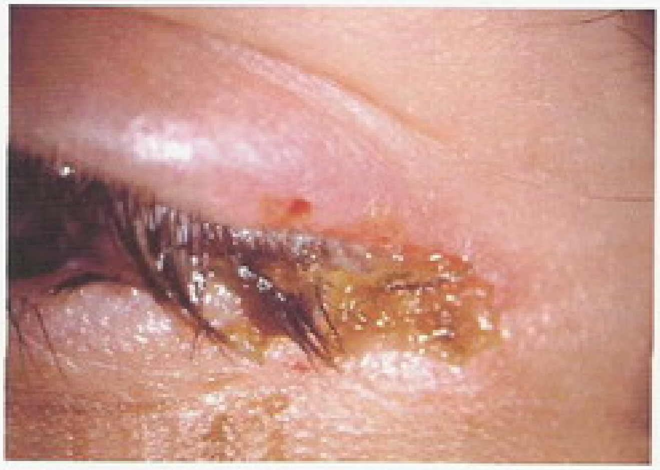
Parasitic blepharitis (nits on cilia)



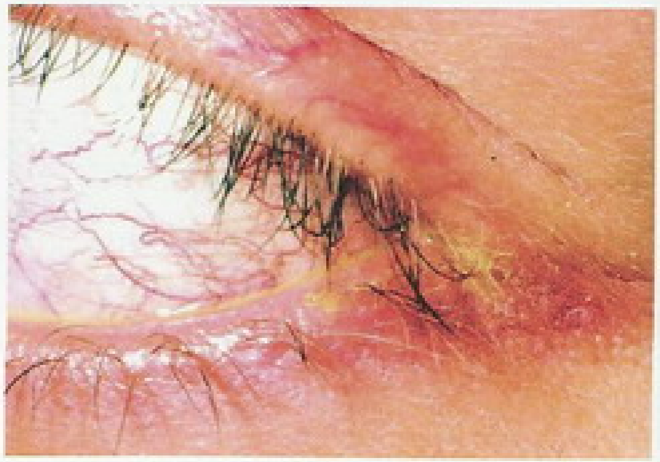
Parasitic blepharitis



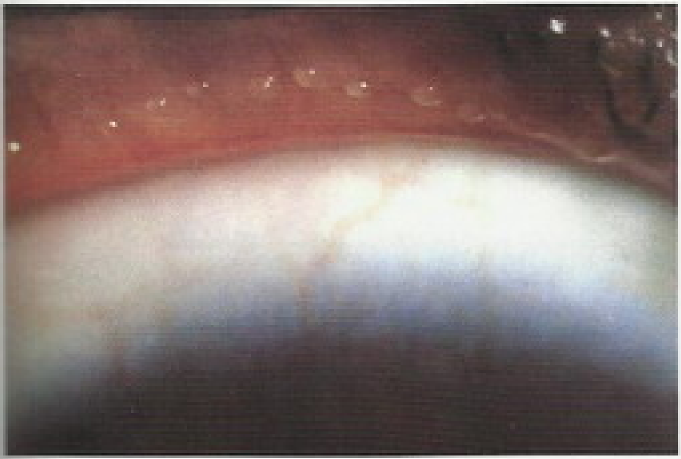
Parasitic blepharitis (Note lice & nits)



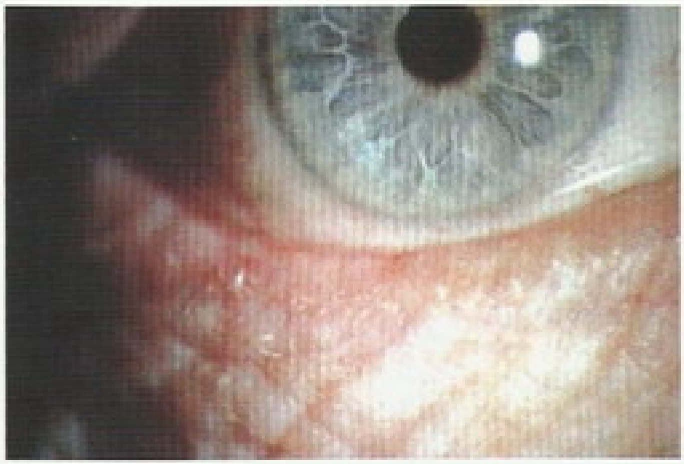
Angular blepharitis



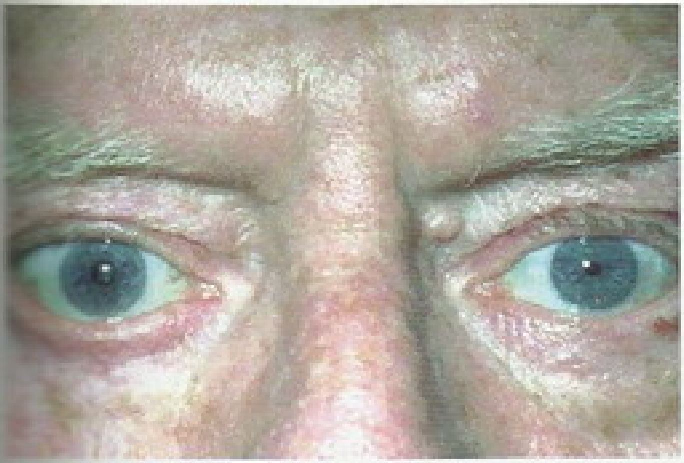
Angular blepharitis



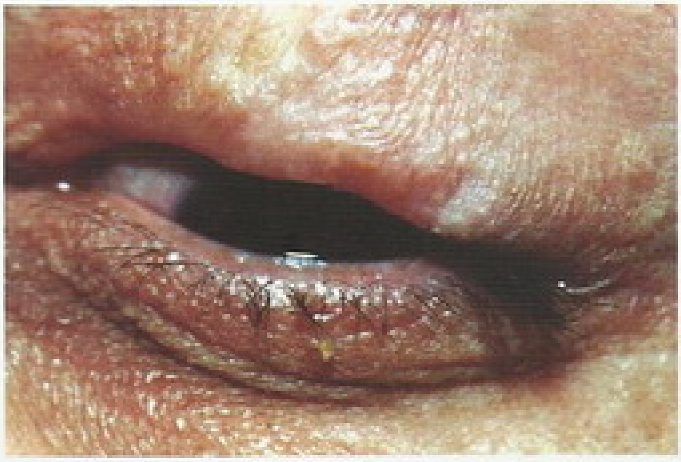
Posterior blepharitis (meibomianitis)



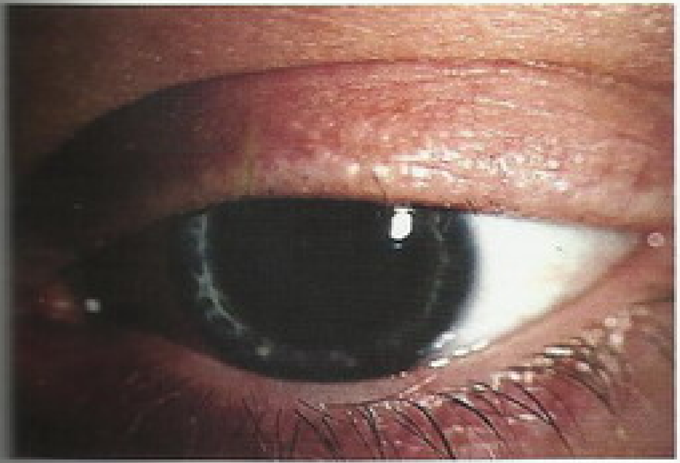
Lower lid Madarosis



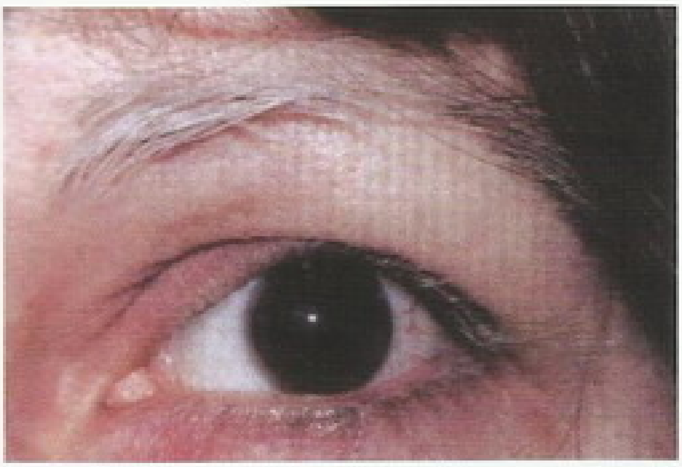
Bilateral lower lid madarosis



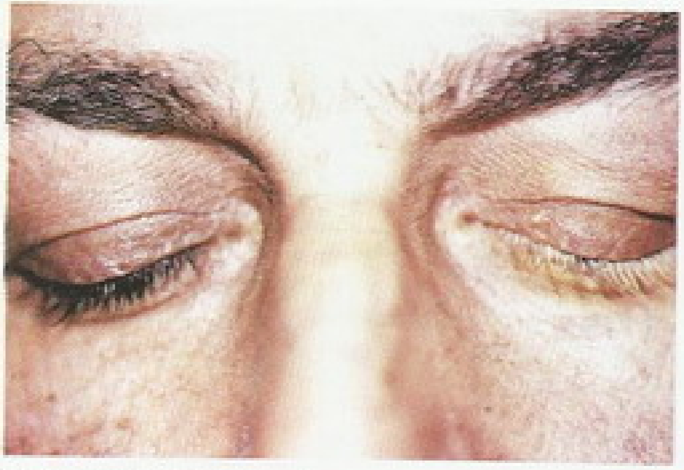
Upper lid Madarosis



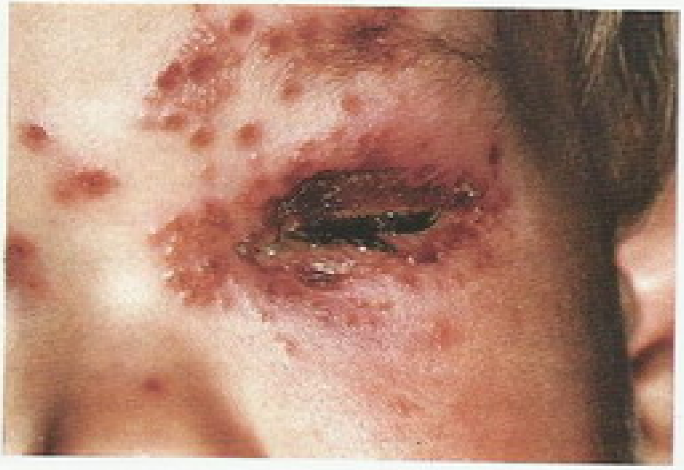
Upper lid Madarosis



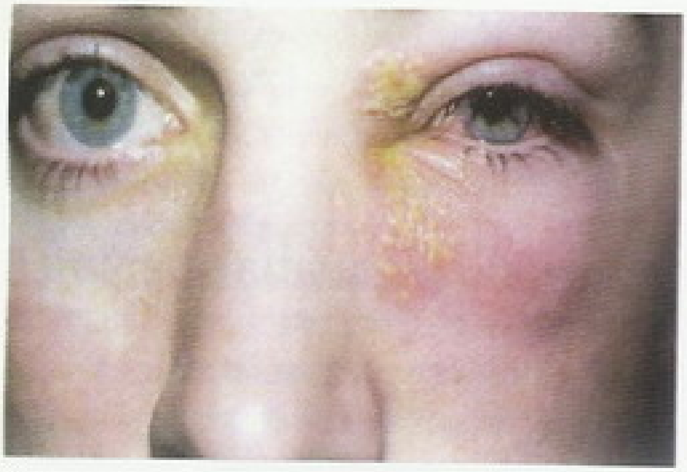
Poliosis (white lashes)



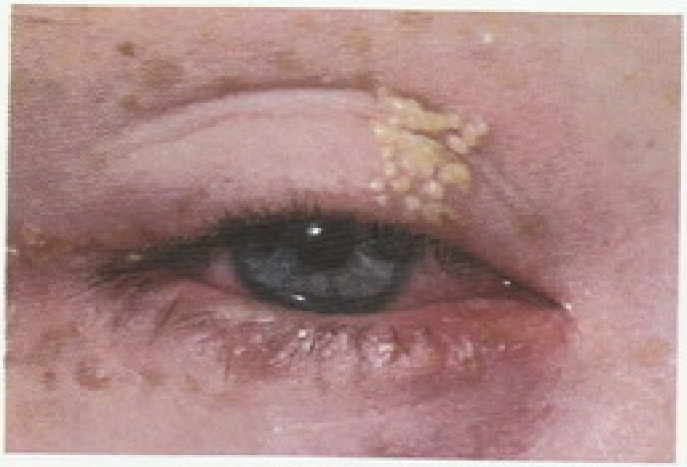
Poliosis (white lashes)



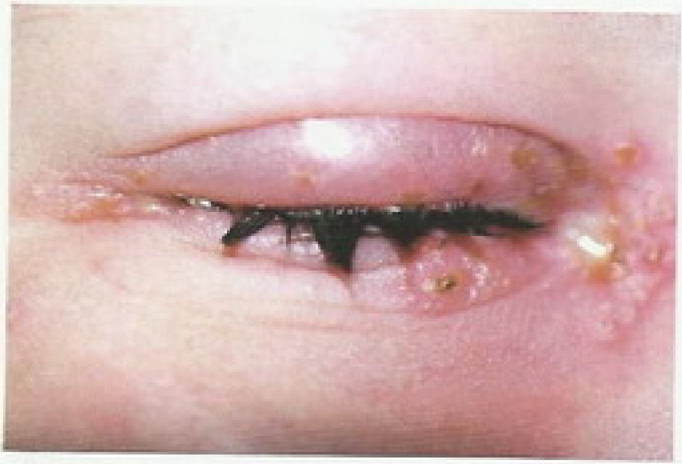
Herpes simplex blepharoconjuctivitis



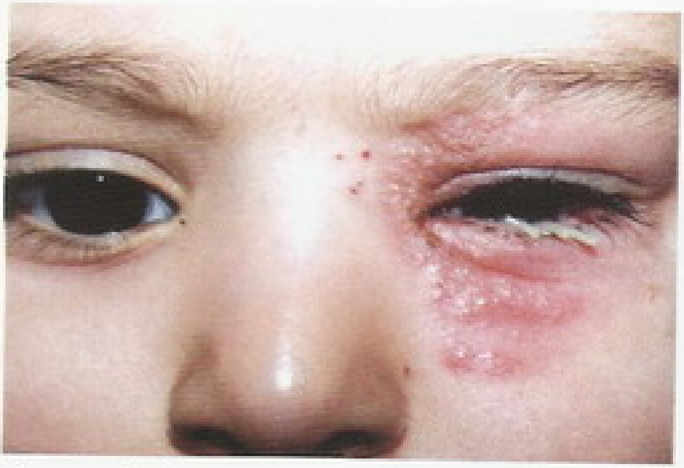
Herpes simplex blepharoconjuctivitis



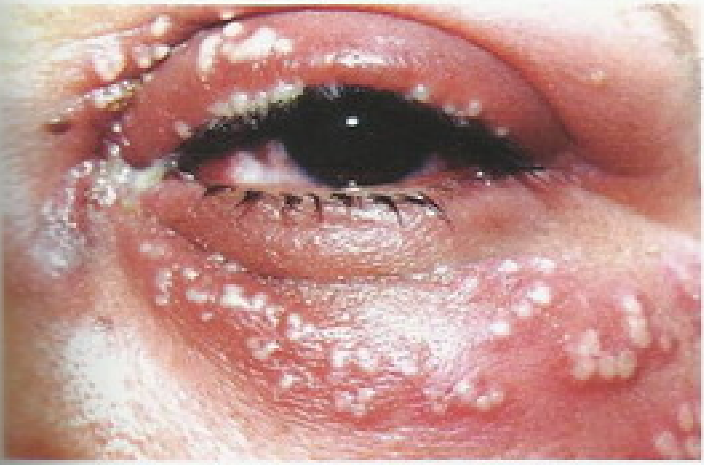
Herpes simplex blepharoconjuctivitis



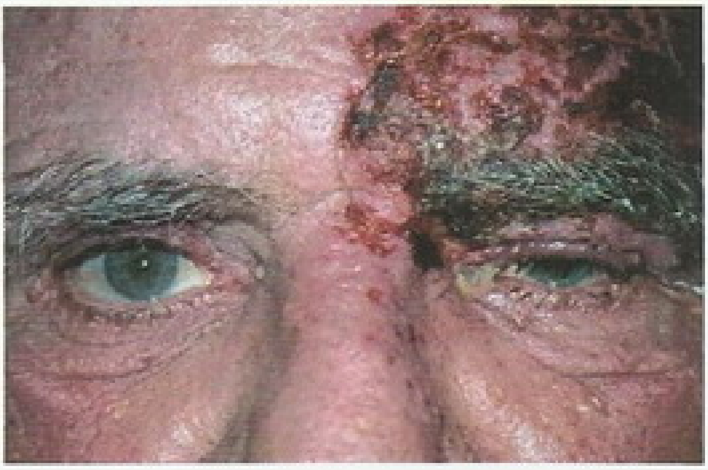
Herpes simplex blepharoconjuctivitis



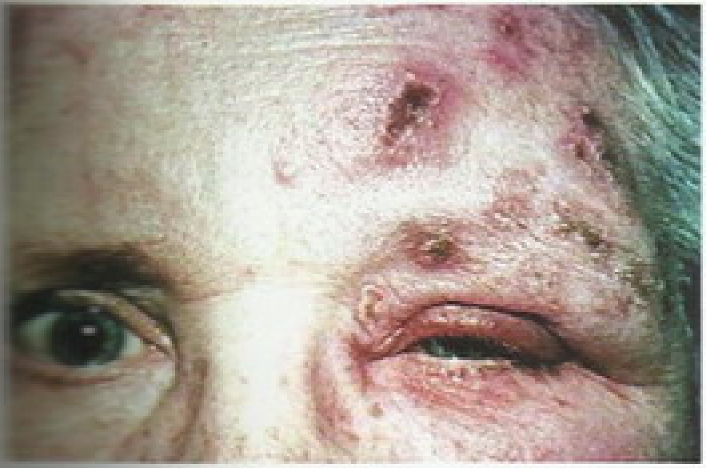
Herpes simplex blepharoconjuctivitis



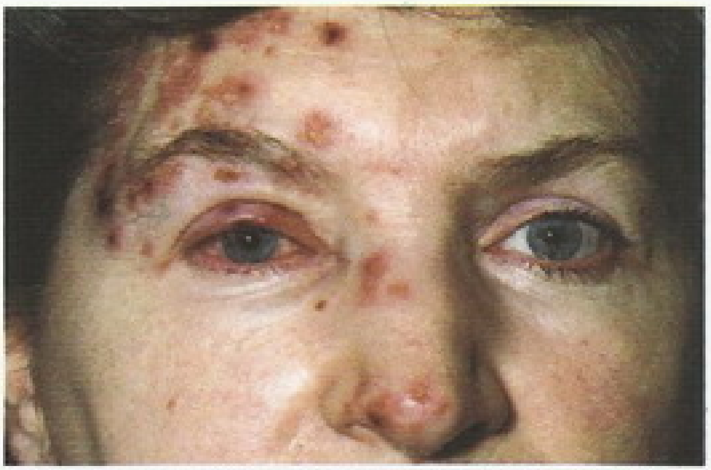
Infected herpes simplex blepharoconjuctivitis



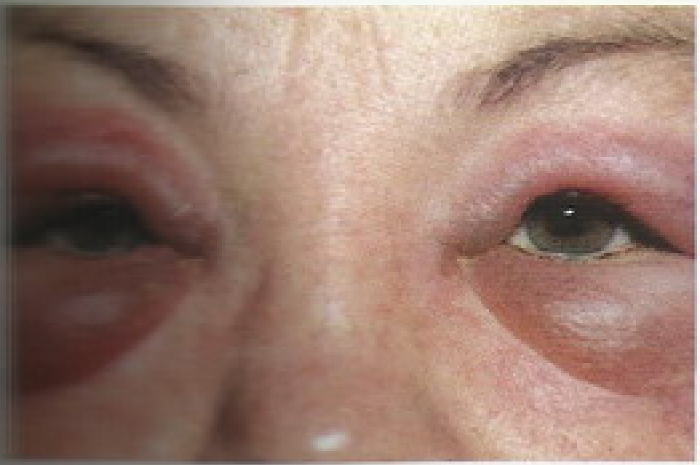
Herpes Zoster ophthalmicus



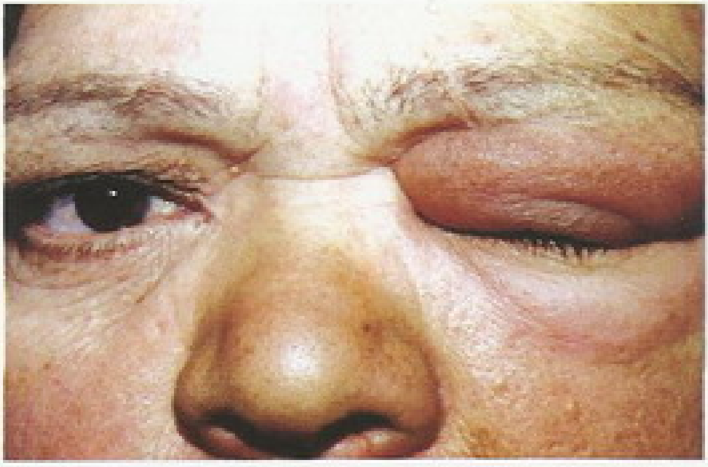
Herpes Zoster ophthalmicus



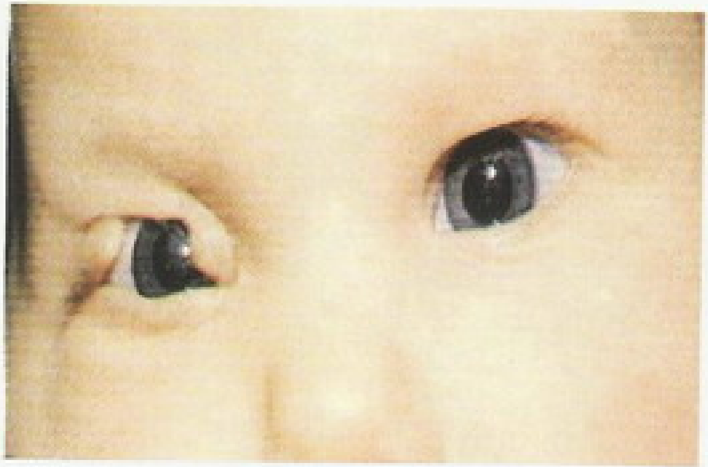
Herpes Zoster ophthalmicus (Hutchinson's sign) involvement of the tip of the nose



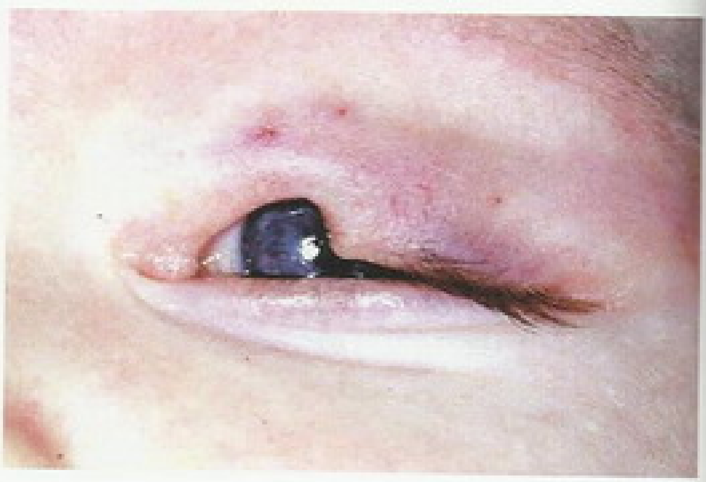
Allergic oedema of the eye lids



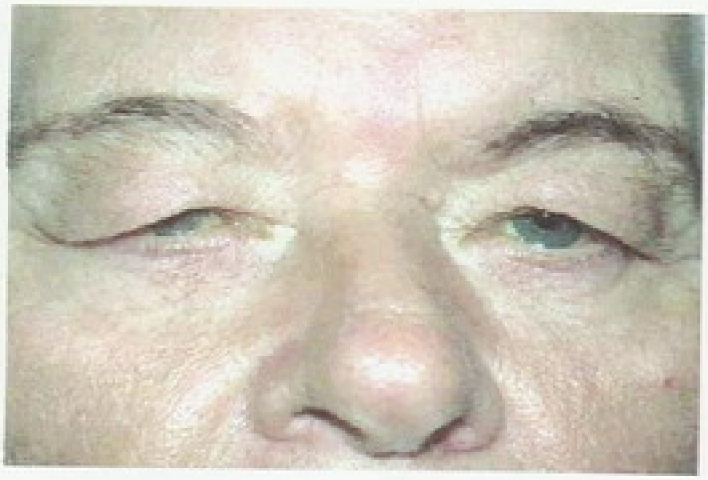
Lid oedema



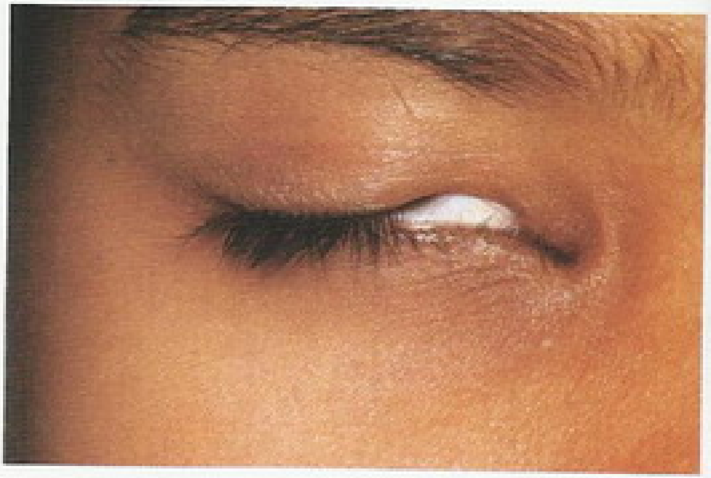
Congenital coloboma of the upper eye lid



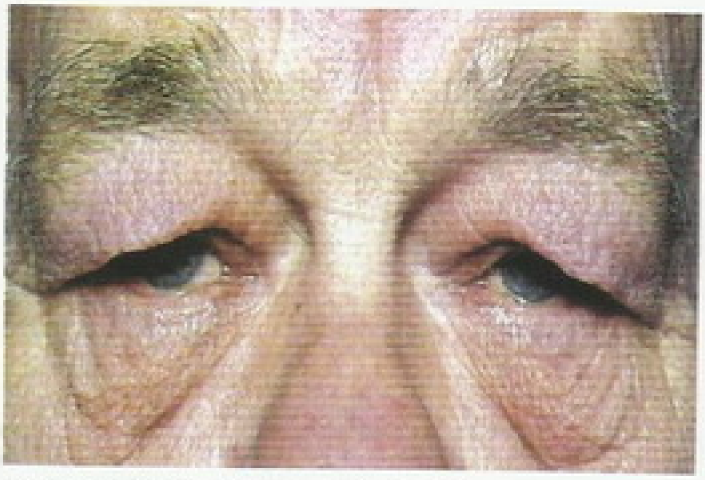
Coloboma of the upper eye lid



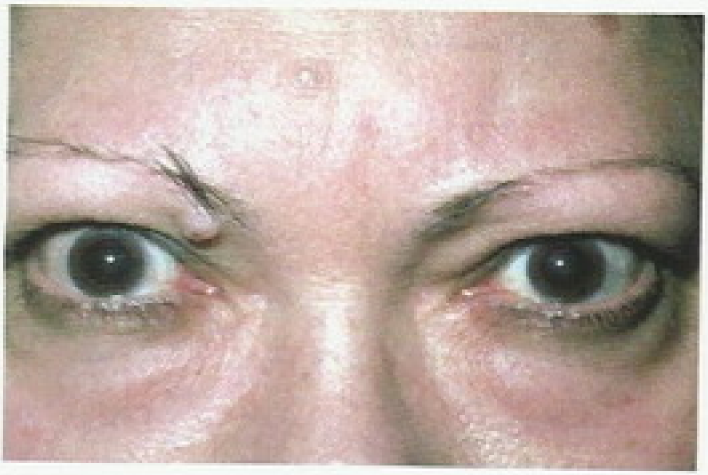
Dermatochalasis (pseudoptosis): redundancy of skin of the upper lid in old age



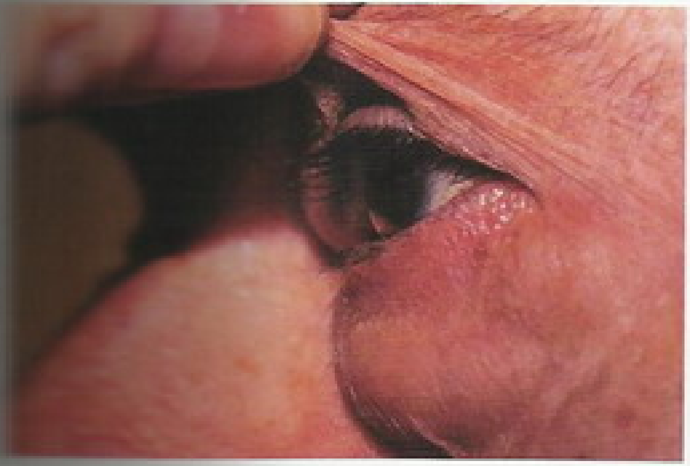
Coloboma of the upper eye lid



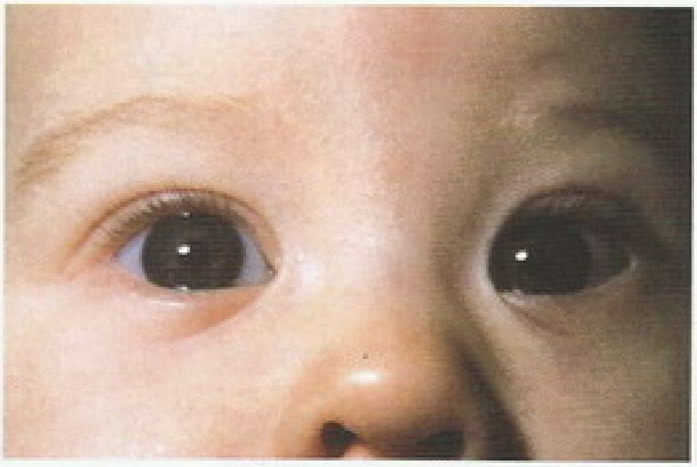
Dermatochalasis (pseudoptosis)



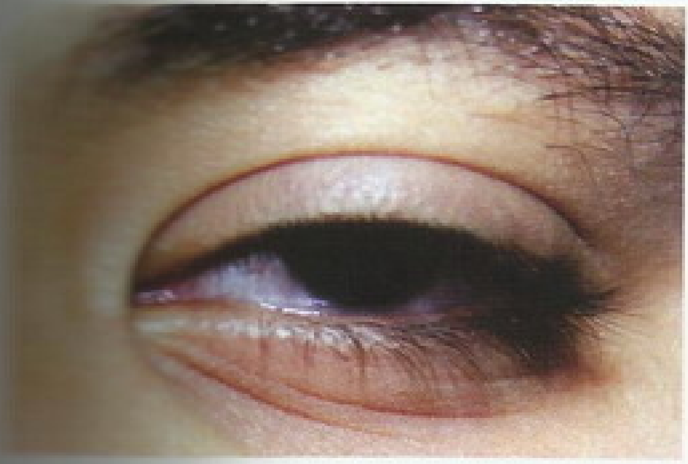
Blepharochalasis with right upper lid sebaceous cyst (occurs in middle age)



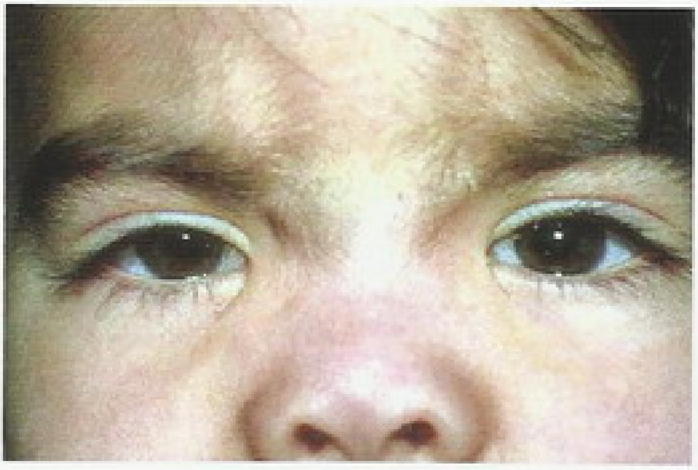
Blepharochalasis



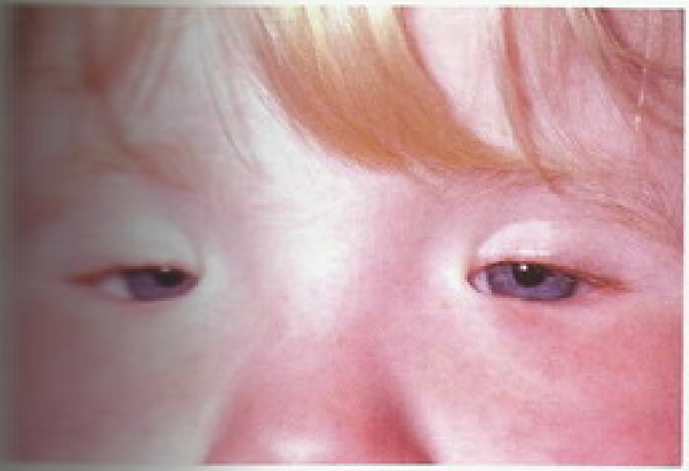
Epicanthus (pseudo-esotropia)



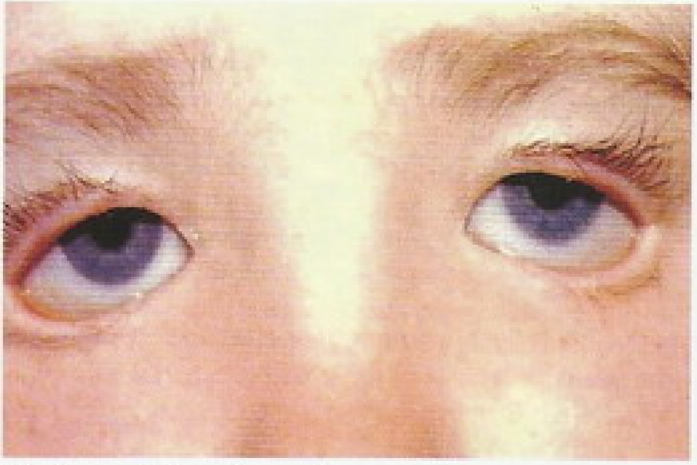
Epicanthus with ptosis



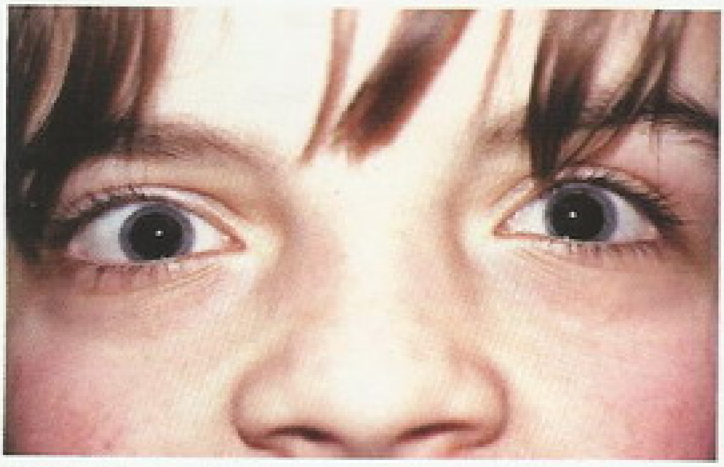
Bilateral Epicanthus



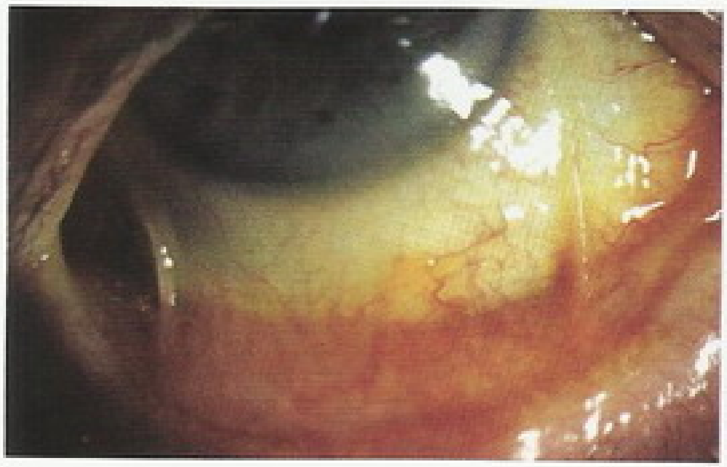
Blepharophimosis syndrome..
1- Epicanthus 2- Ptosis 3- telecanthus
4- Ectropion.



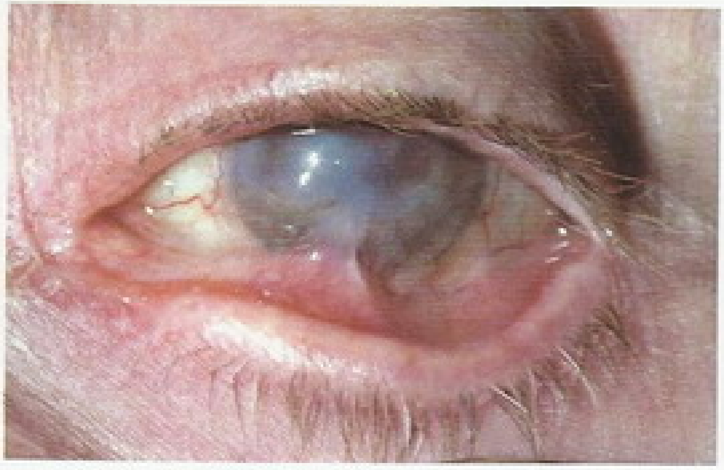
Blepharophimosis syndrome



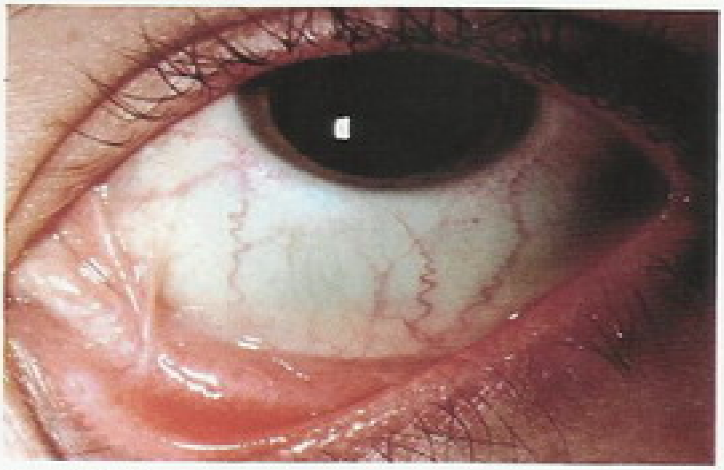
Telecanthus



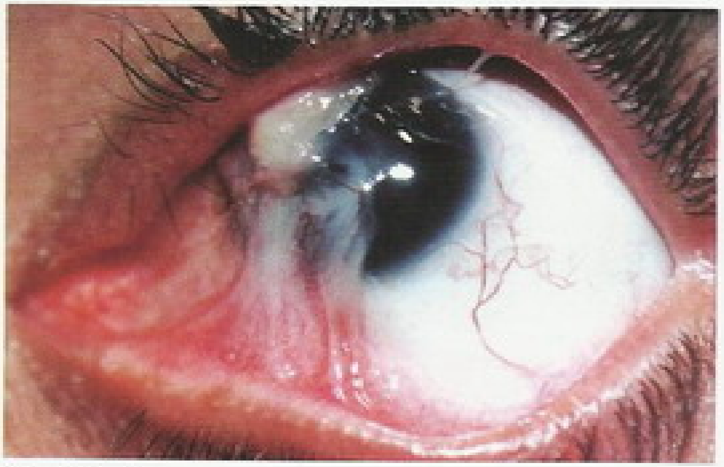
Symblepharon



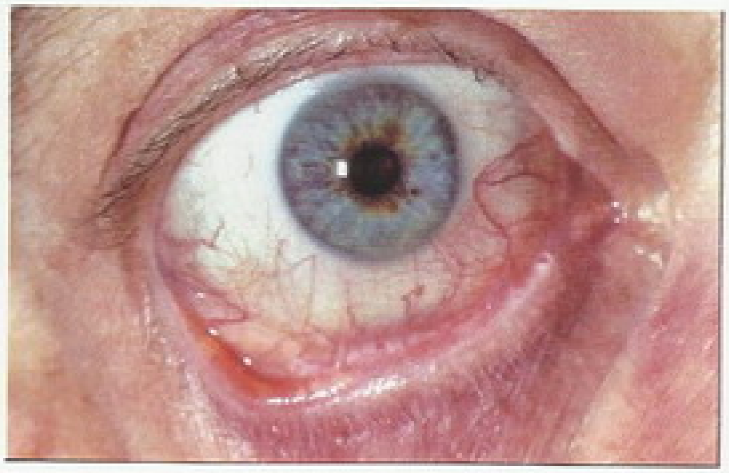
Symblepharon



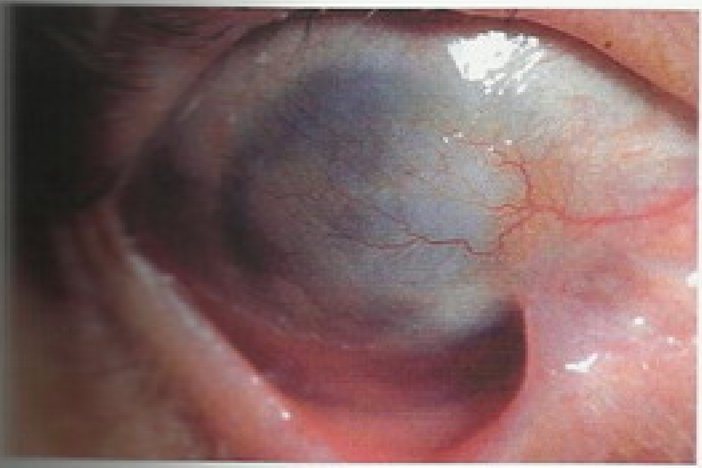
Symblepharon



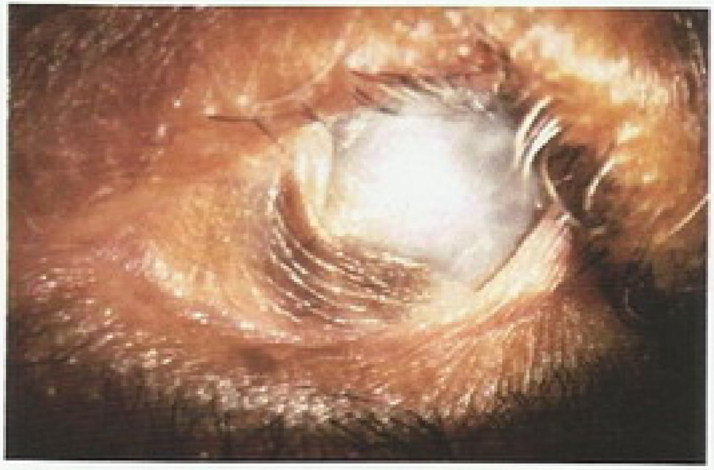
Symblepharon



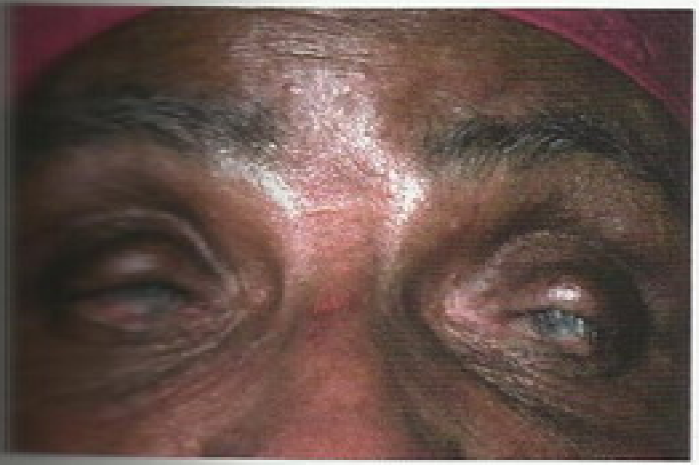
Posterior Symblepharon



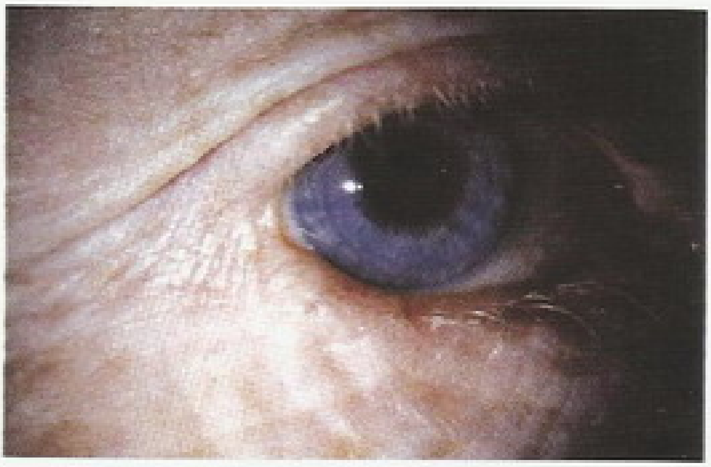
Ocular pemphigoid & symblepharon



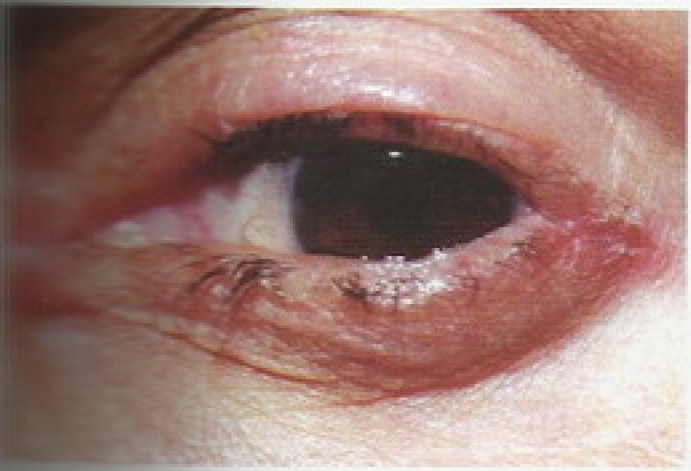
Ocular pemphigoid



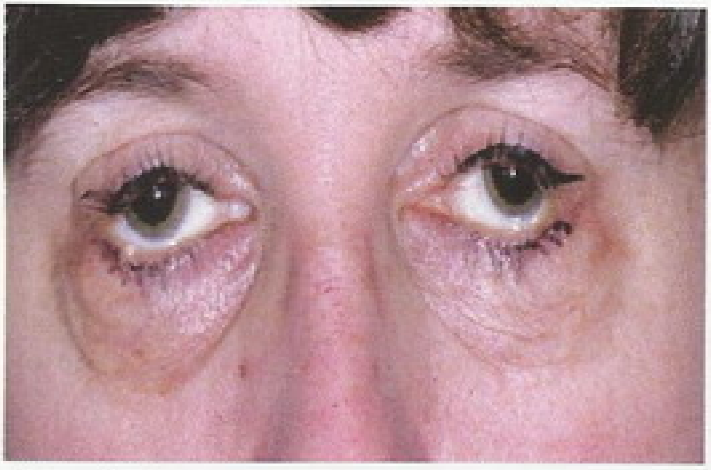
Ocular pemphigoid



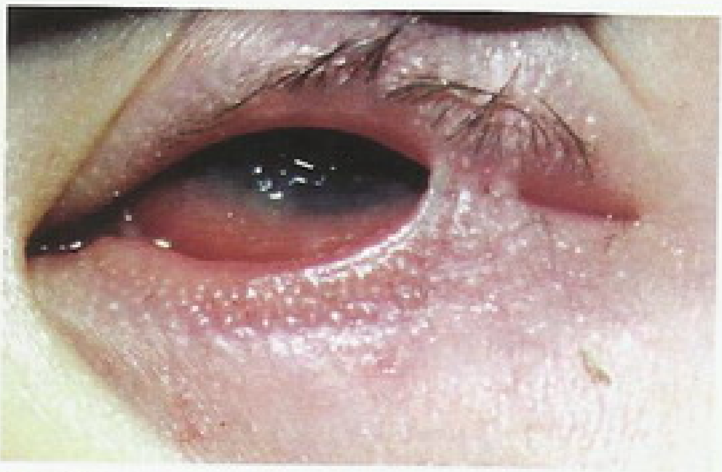
Lateral ankyloblepharon



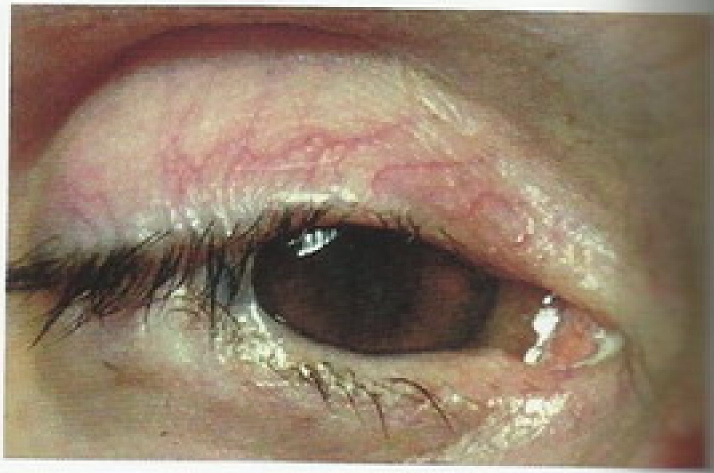
[illegible] ankyloblepharon



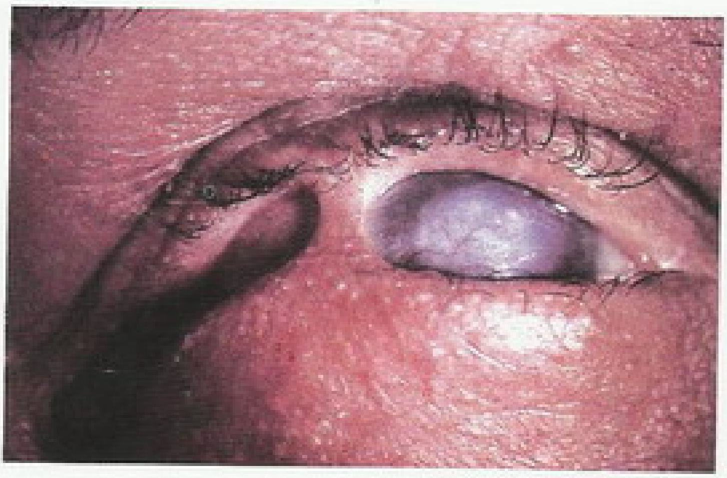
lateral ankyloblepharon
(apparent divergent squint)



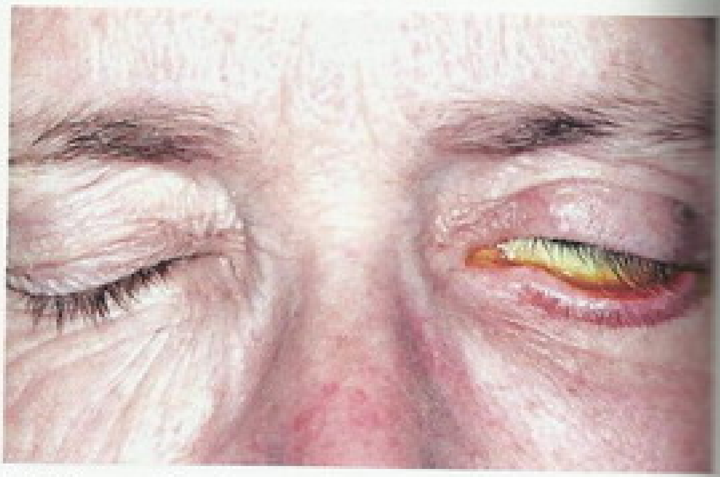
Laterl tarosrraphy



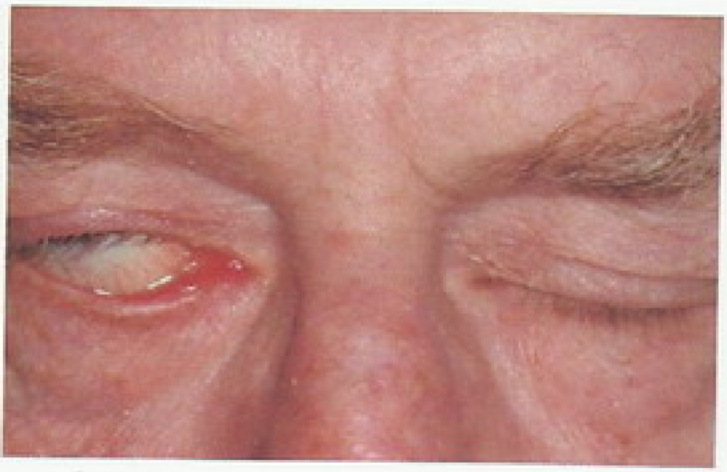
Laterl tarsorraphy



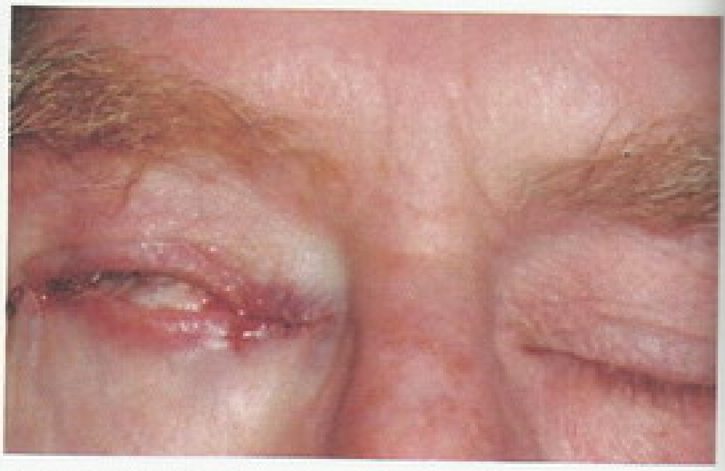
Central (median) tarsorraphy



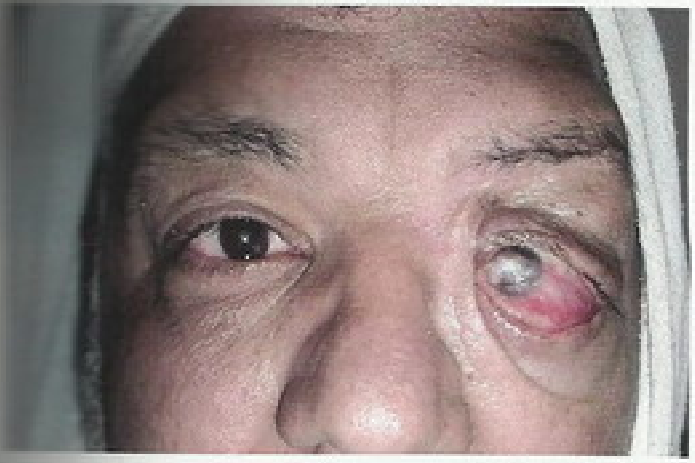
Left lagophthalmos



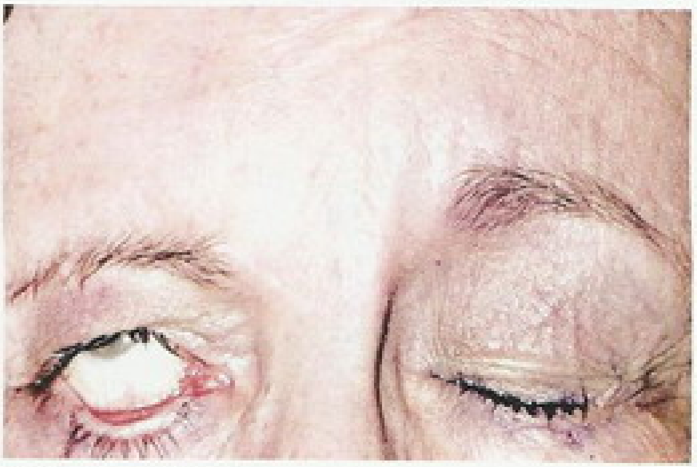
right lagophthalmos



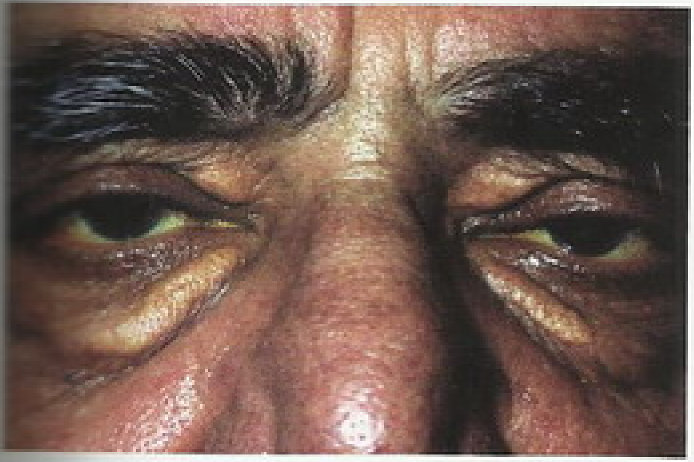
right lagophthalmos treateted with 2-paramedian tarsorraphy



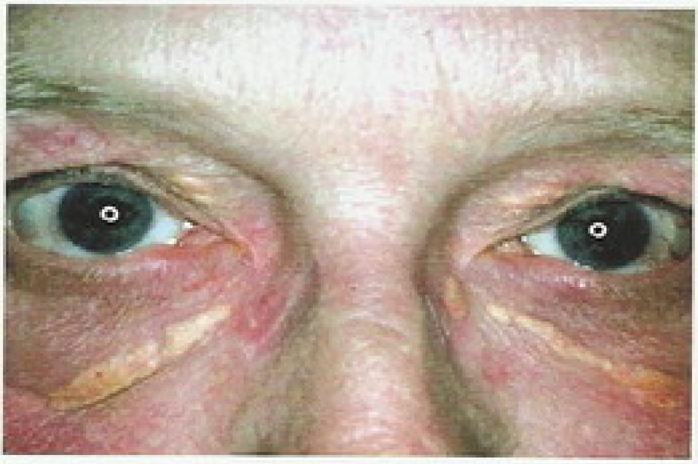
Left lagophthalmos due to proptosis



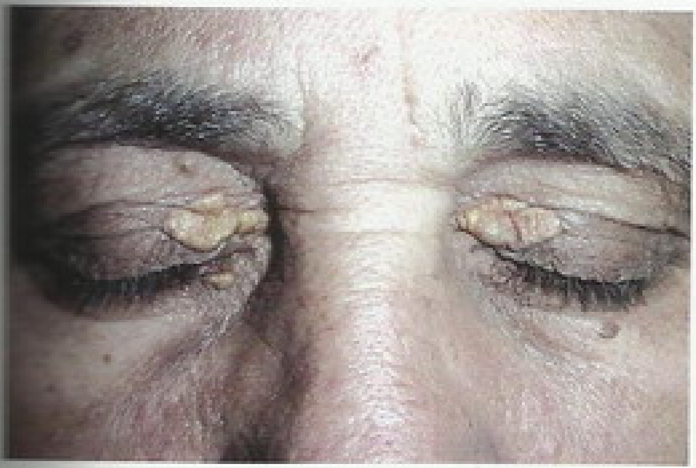
Right lagophthalmos



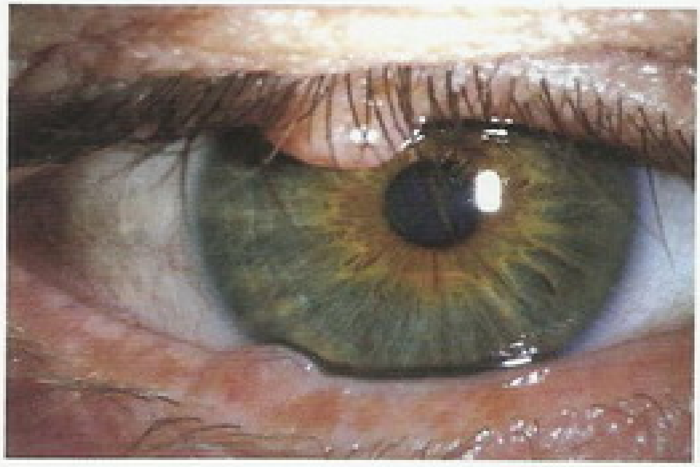
Xanthelasma



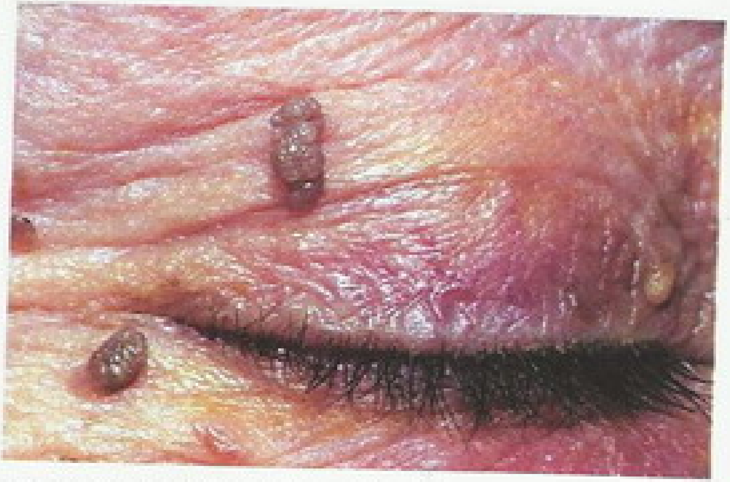
Xanthelasma



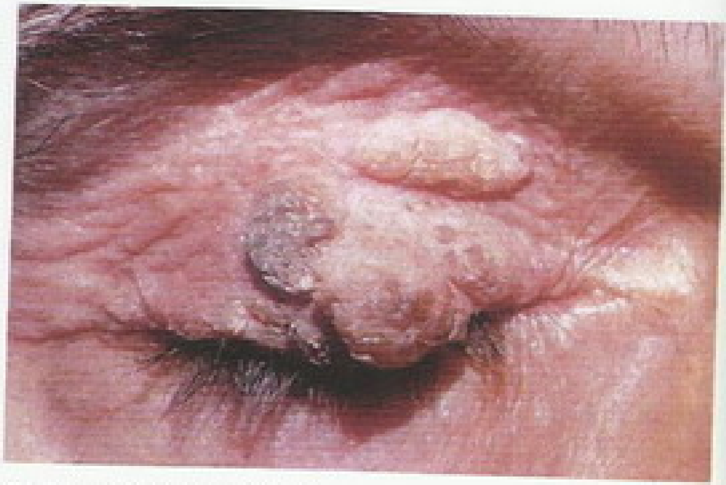
Xanthelasma



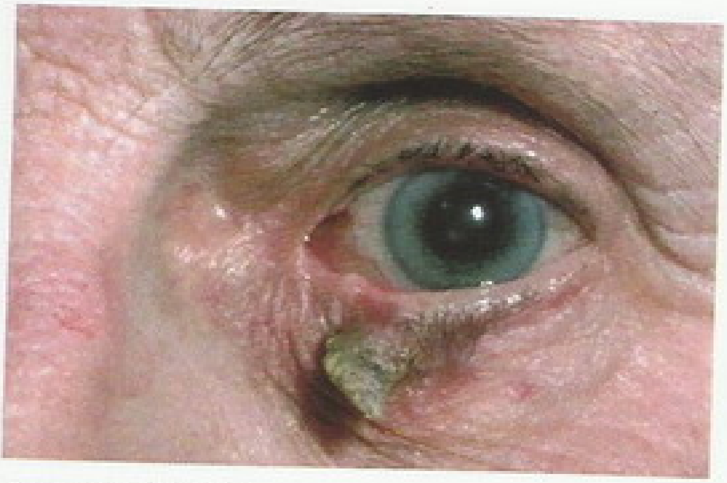
Papilloma of the upper & lower lids



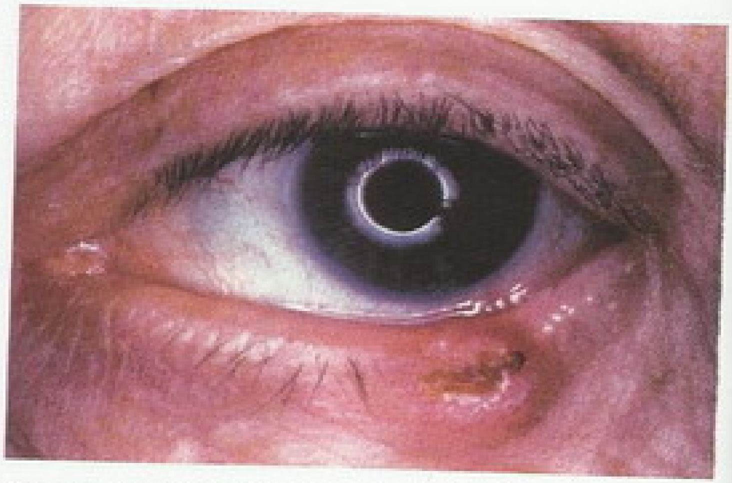
Viral warts of the skin of the lid



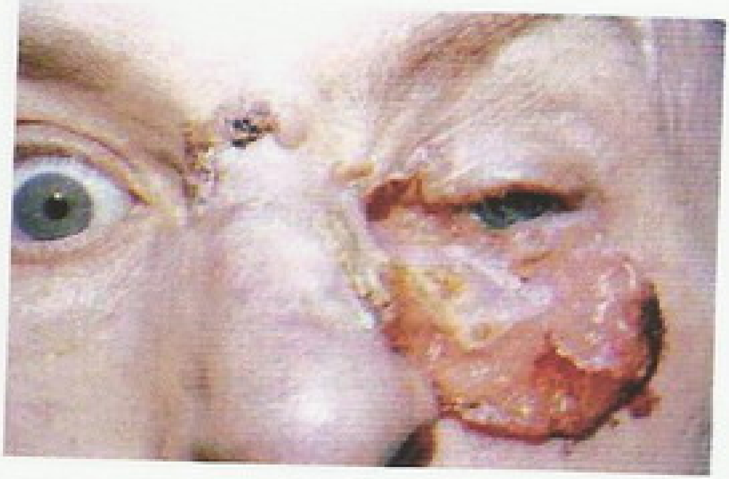
Seborrhoeic keratosis



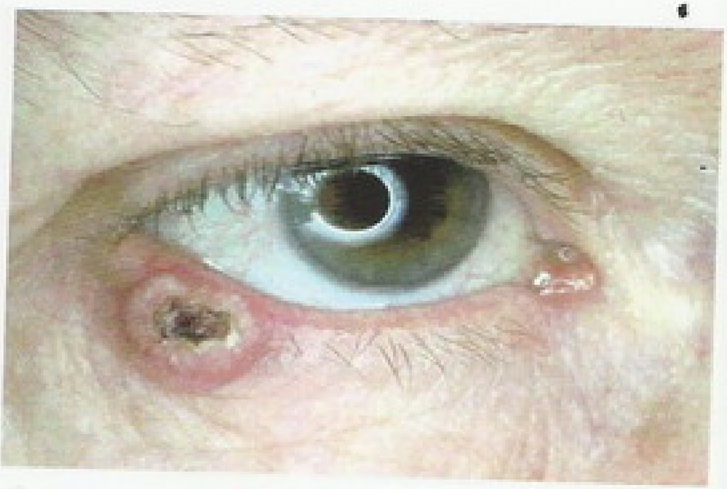
Cutaneous horn



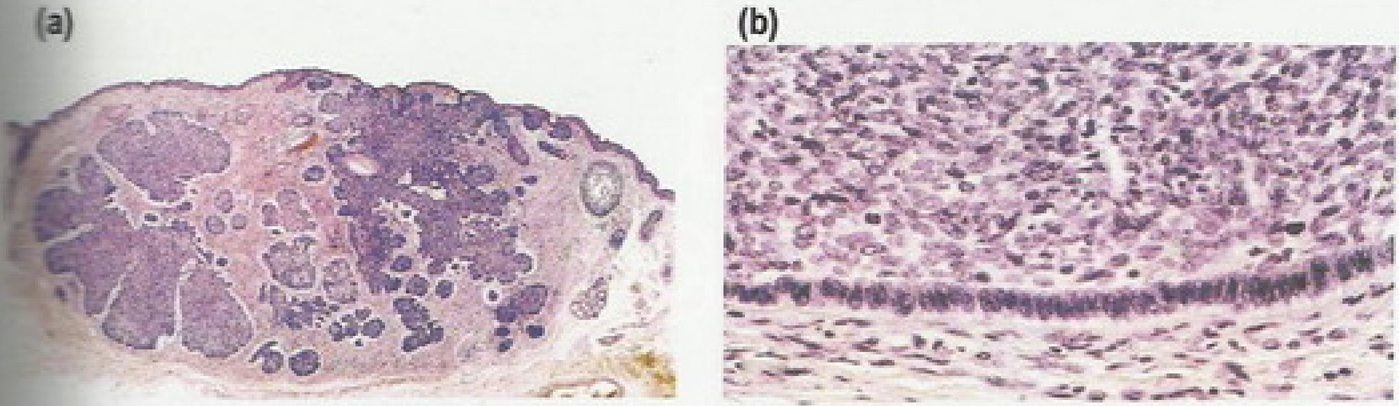
Basal cell carcinoma (rodent ulcer)



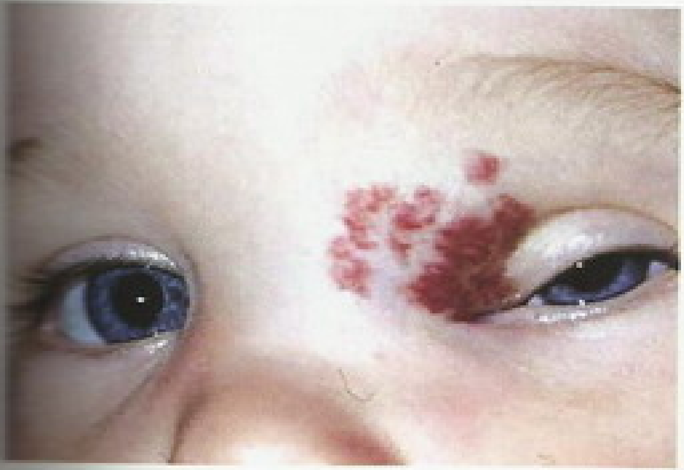
Basal cell carcinoma (rodent ulcer) local spread



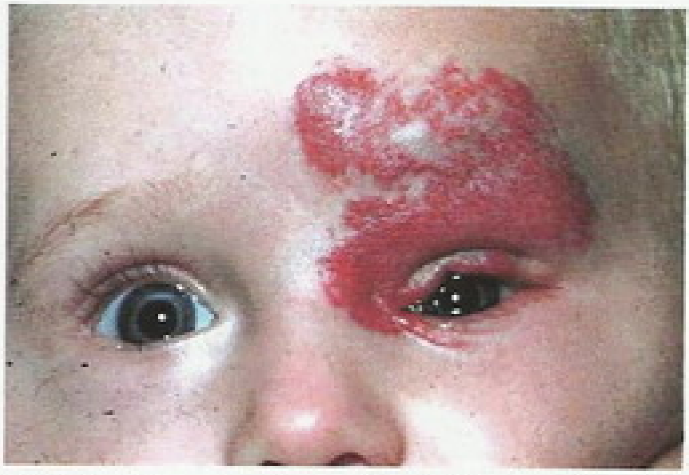
Basal cell carcinoma (rodent ulcer)



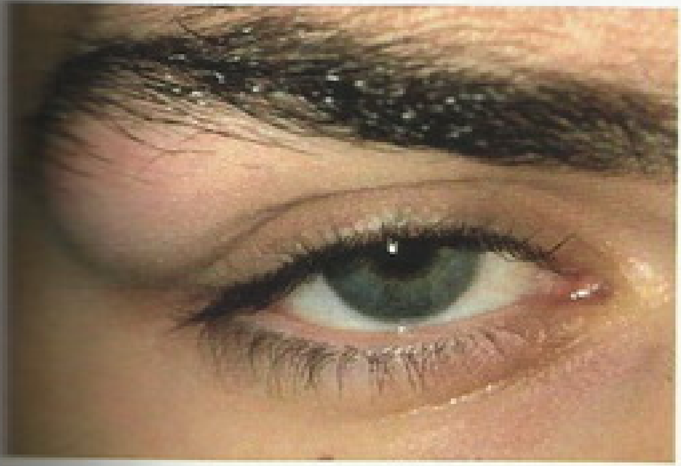
Histology of basal cell carcinoma
(a) Downward proliferation of basal cells
(b) Palisading arrangement of cells



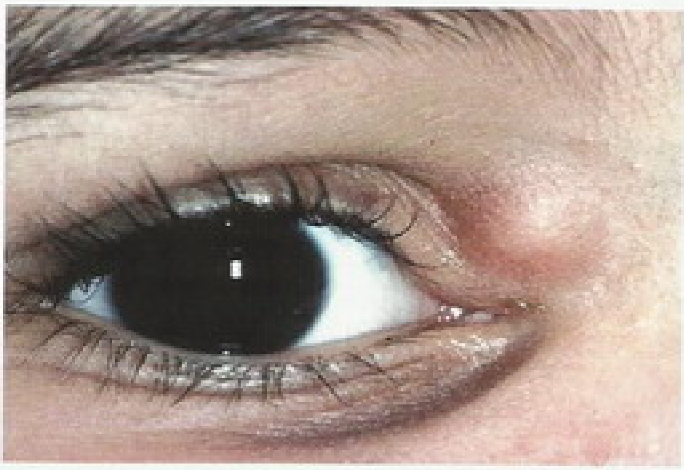
Capillary haemangioma (strawberry naevus)



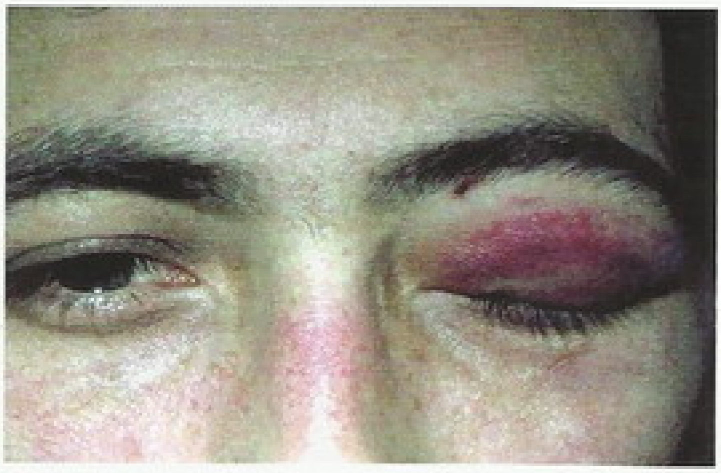
Capillary haemangioma of the left upper lid with coloboma



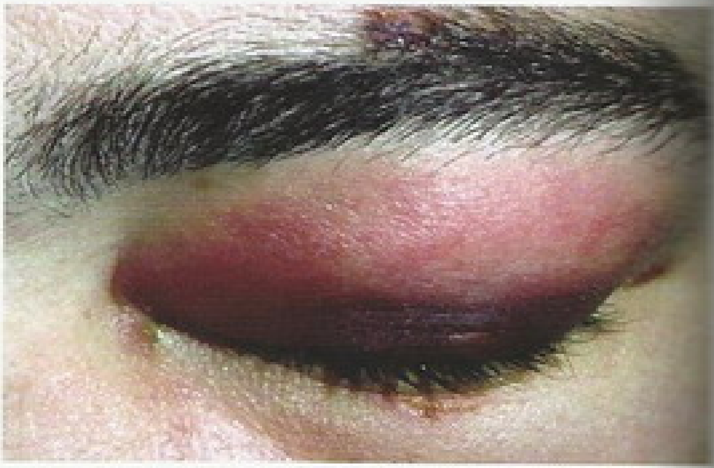
External angular dermoid



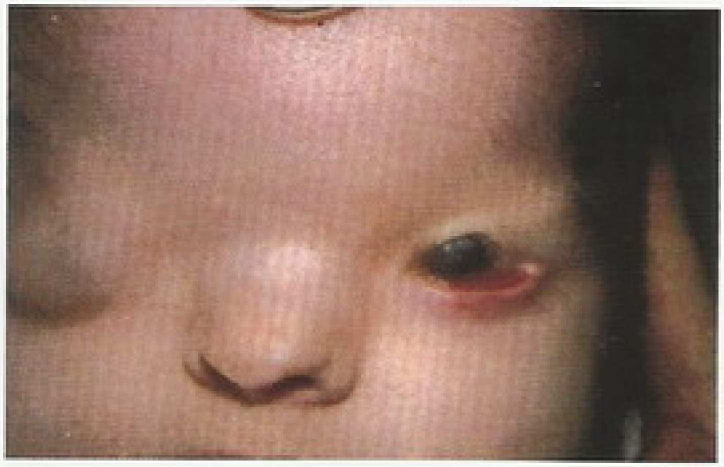
Internal angular dermoid (above m. palpebral ligament)



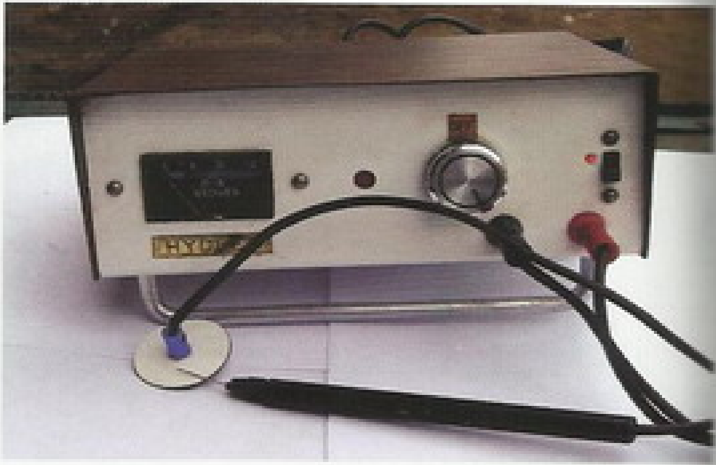
Left traumatic ptosis&lid ecchymosis



Lid ecchymosis



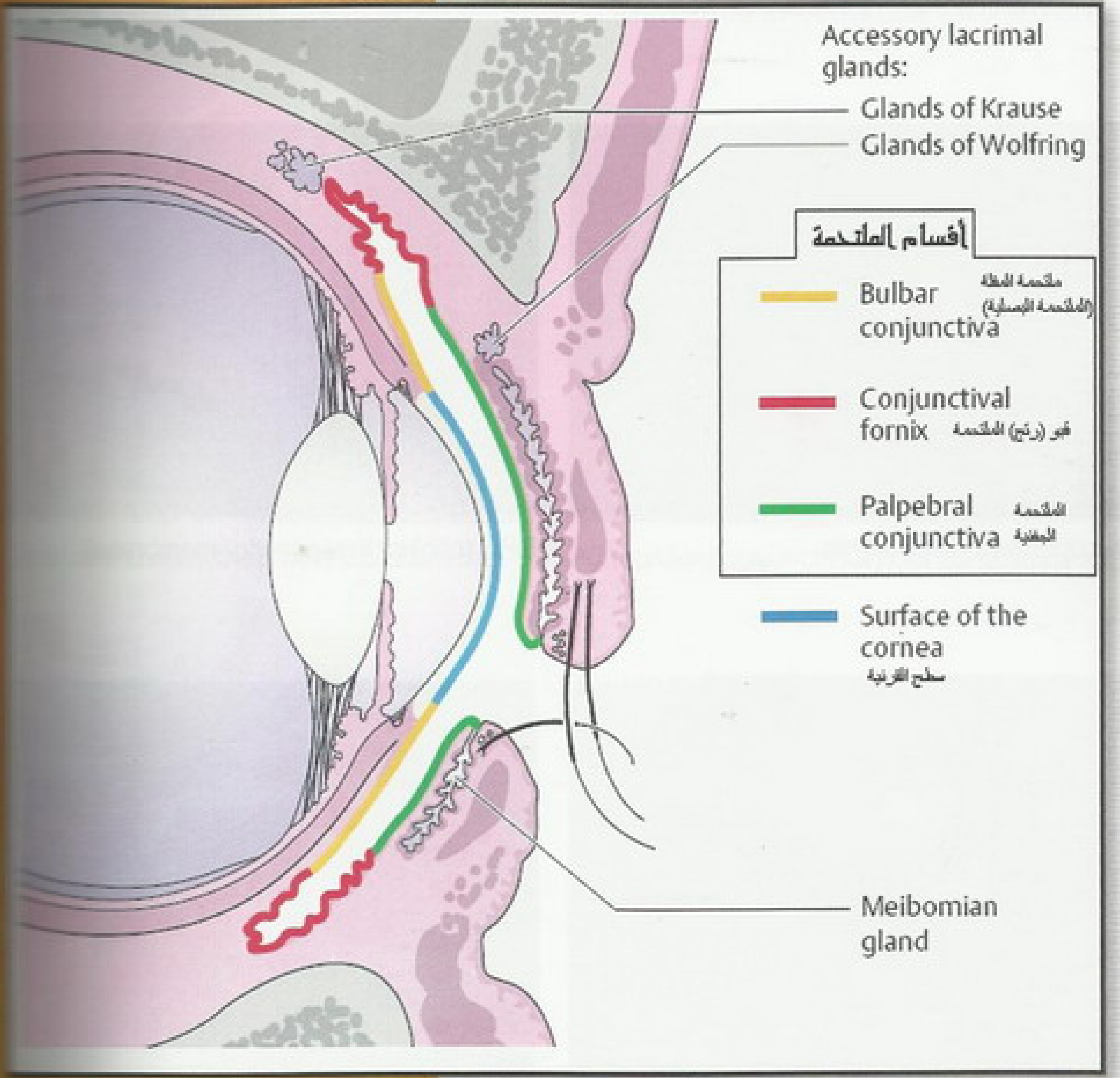
Right cryptophthalomos with left upper lid coloboma

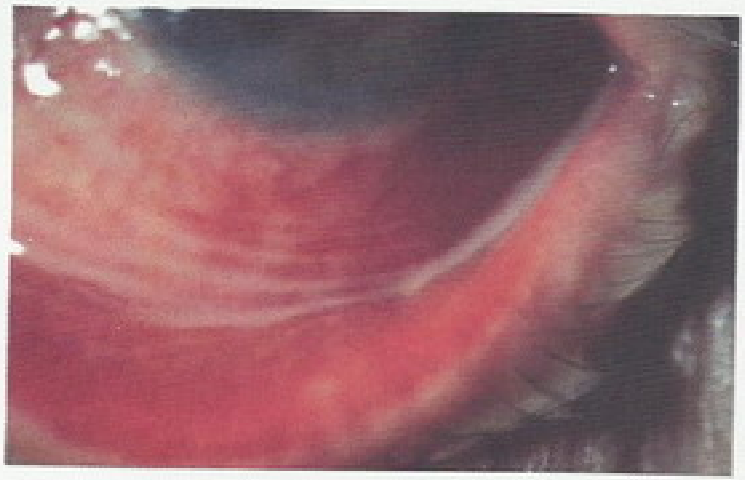


Electrolysis: for destruction of maldirected lashes

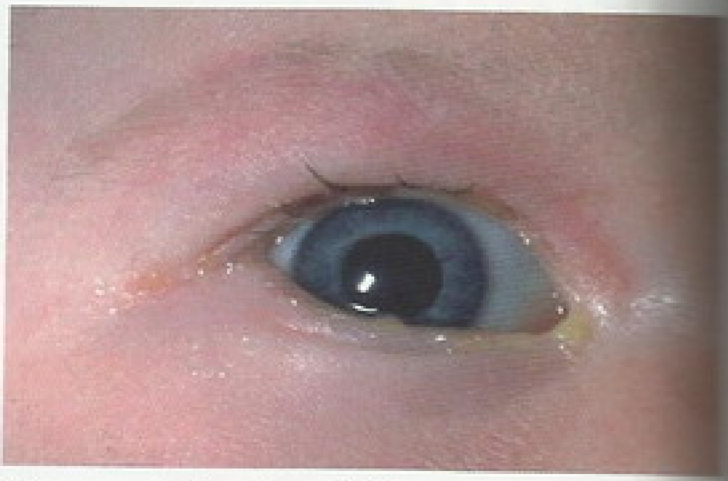
Chapter 2

Disorders of Conjunctiva

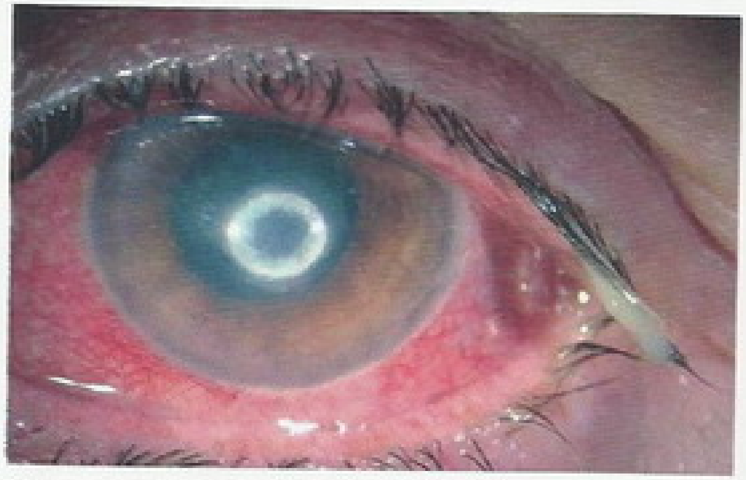

Accessory lacrimal glands:
Glands of Krause
Glands of Wolfring
أقسام الملتحمة
Bulbar conjunctiva
ملتحمة المقلة (الملتحمة البصلية)
Conjunctival fornix
قبو (رتج) الملتحمة
Palpebral conjunctiva
الملتحمة الجفنية
Surface of the cornea
سطح القرنية
Meibomian gland



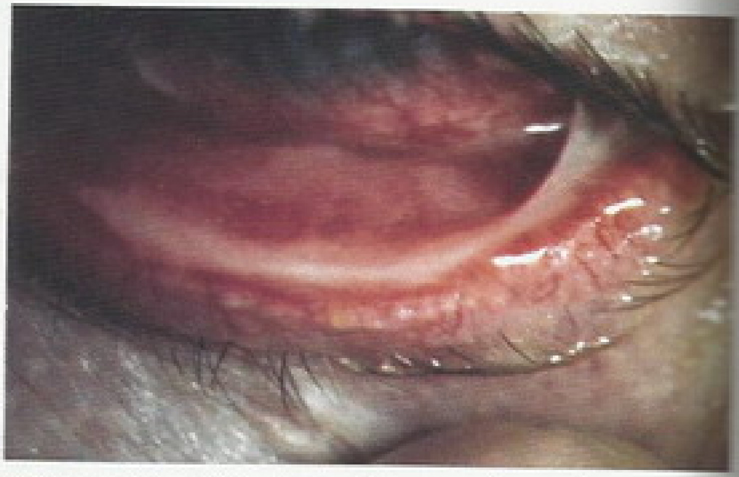
Mucopurulent conjunctivitis



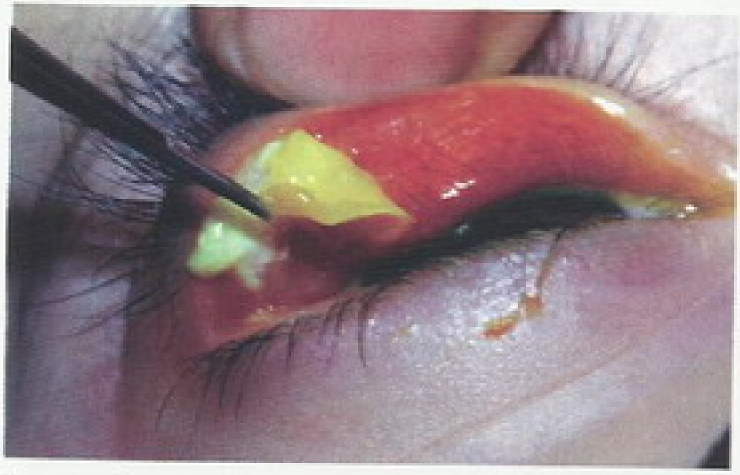
Mucopurulent conjunctivitis



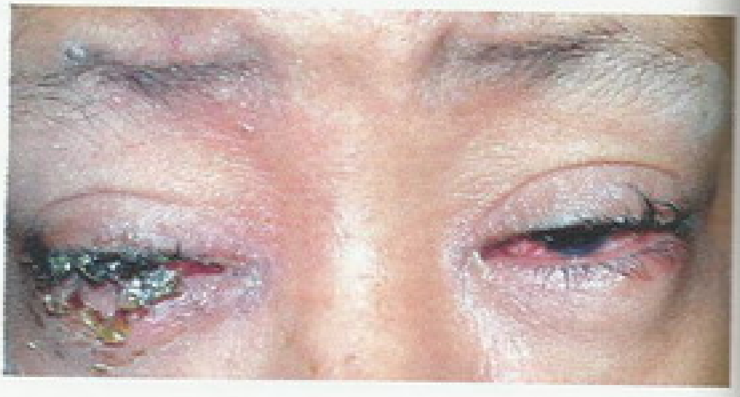
Mucopurulent conjunctivitis



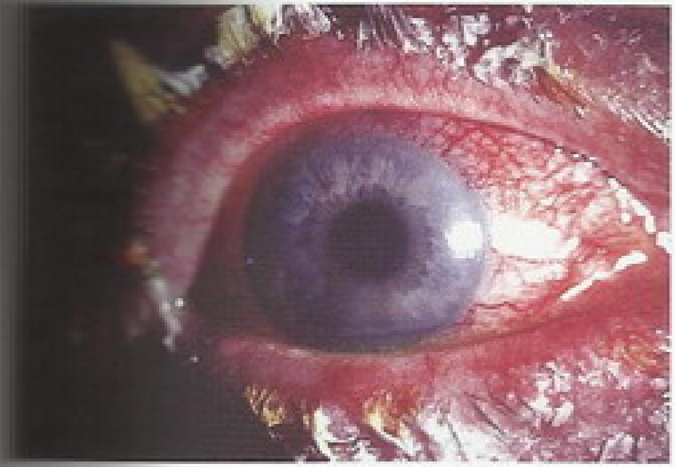
MPC (conjunctival pseudo- membrane)



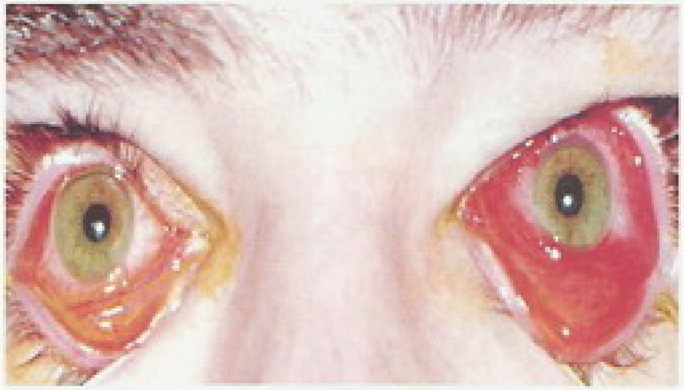
Everted upper lid showing removal of conjunctival pseudo- membrane



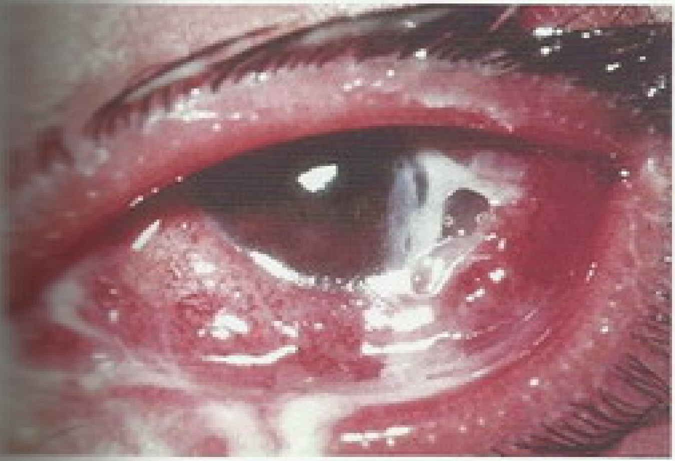
MPC with dried discharge



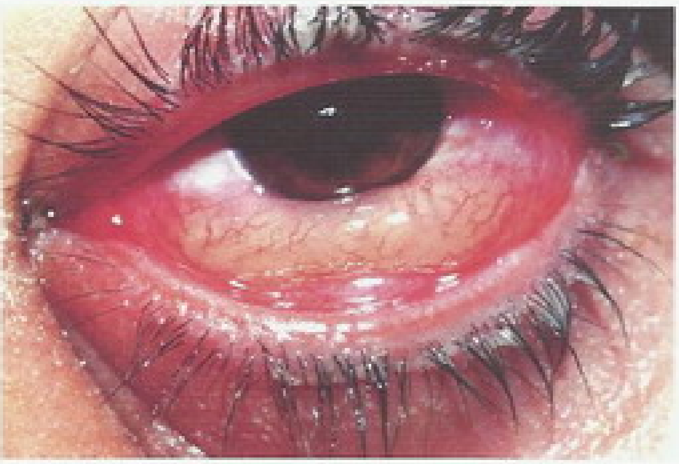
MPC (Note severe crusting of eye lids)



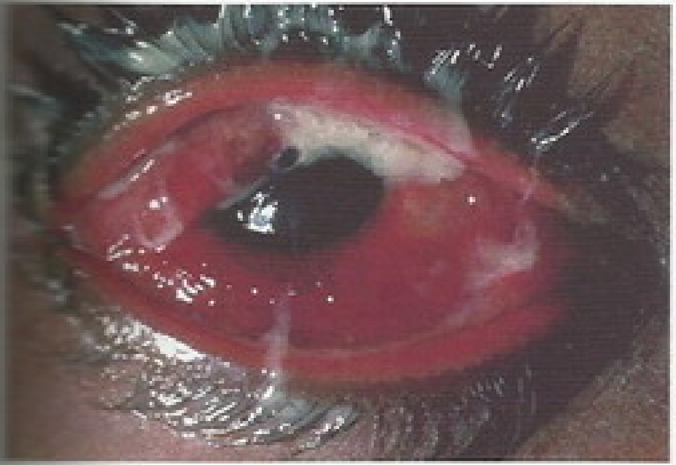
PC (purulent conjunctivitis note the chemosis)



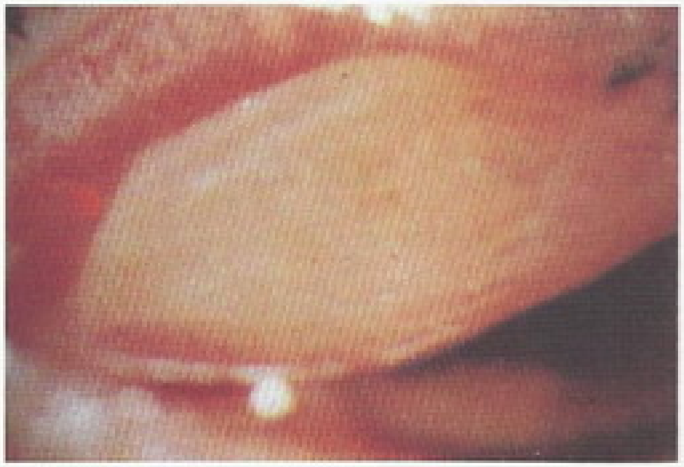
PC (purulent conjunctivitis note the chemosis)



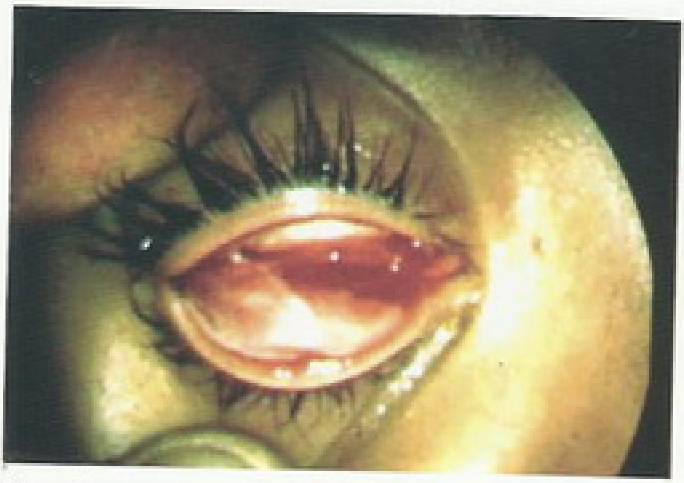
PC (purulent conjunctivitis note the chemosis)



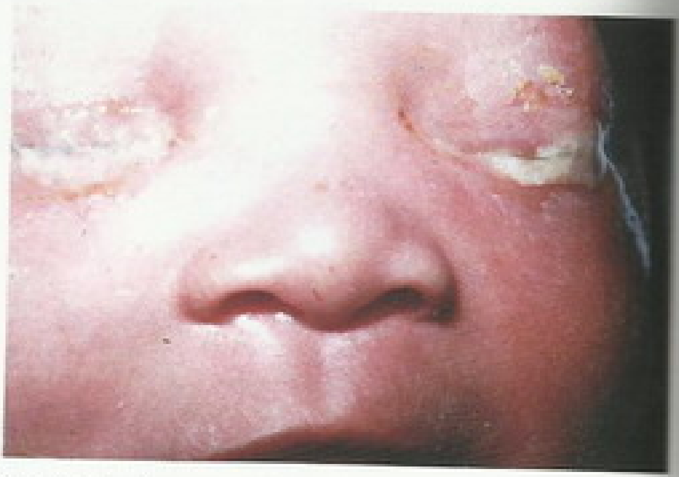
PC (purulent conjunctivitis note the chemosis)



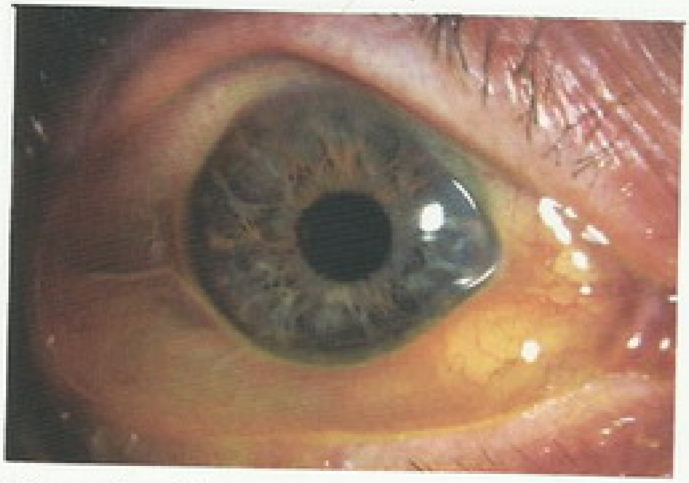
Membranous conjunctivitis (Everted upper lid)



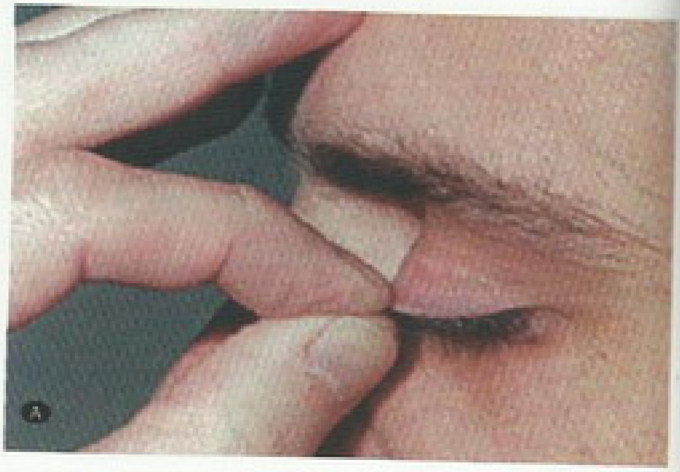
Membranous conjunctivitis

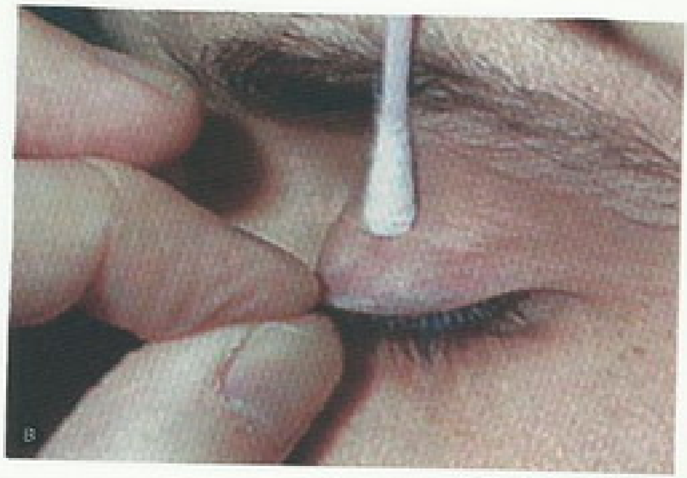


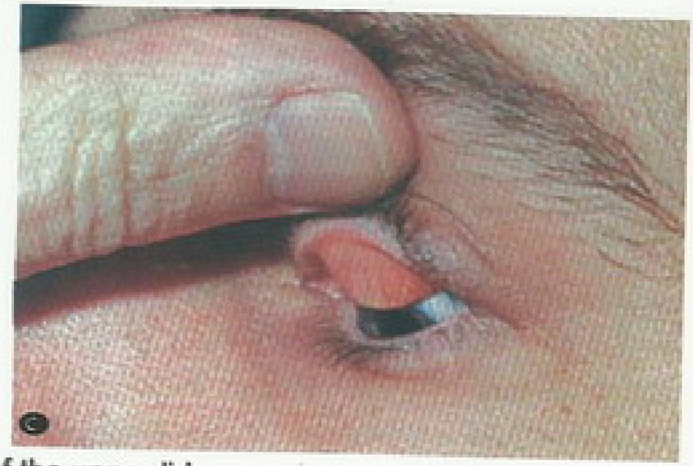
Ophthalmia-neonatorum



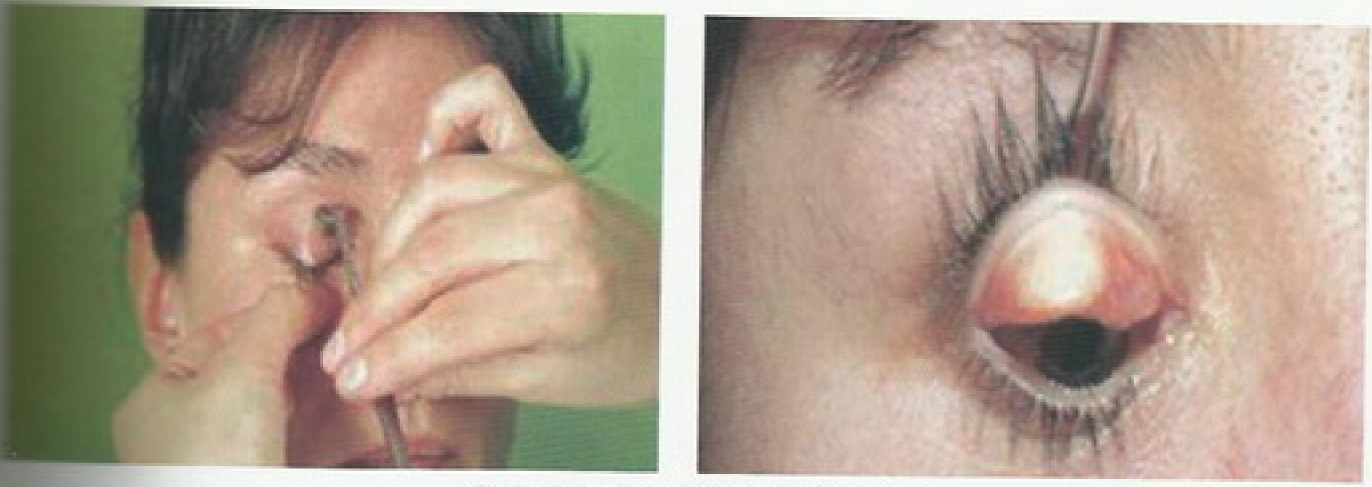
Chemosis of the conjunctiva



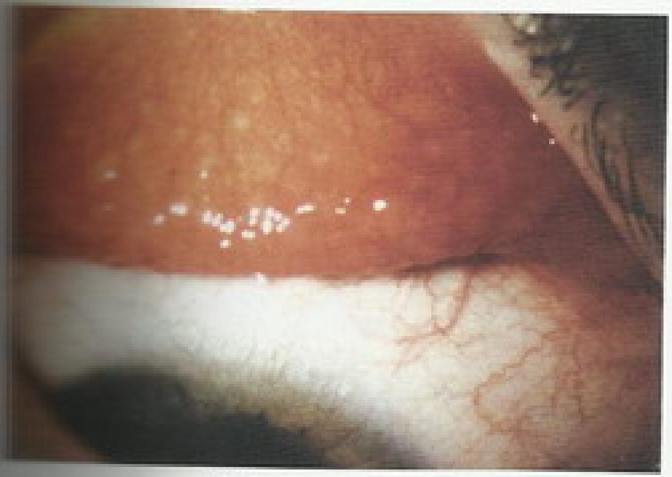




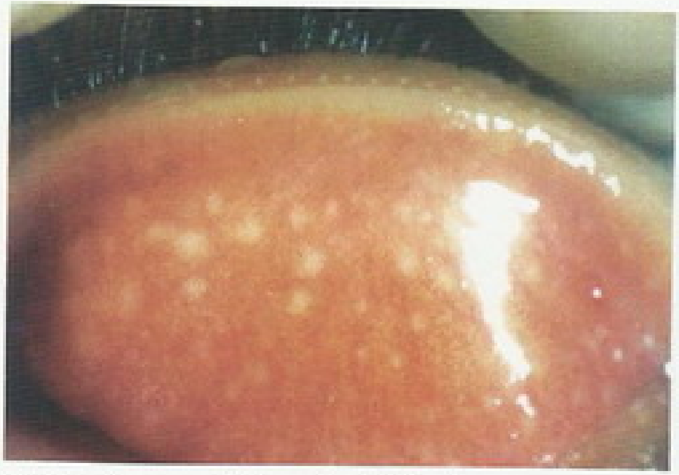
A,B,C : eversion of the upper lid
for examination of the upper palbebral conjunctiva



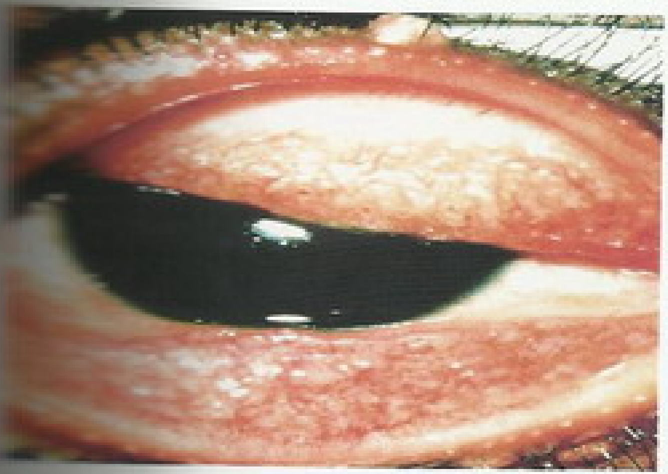
Using of Desmarres lid retractor
for examination of upper palbebral conjunctiva & upper fornix



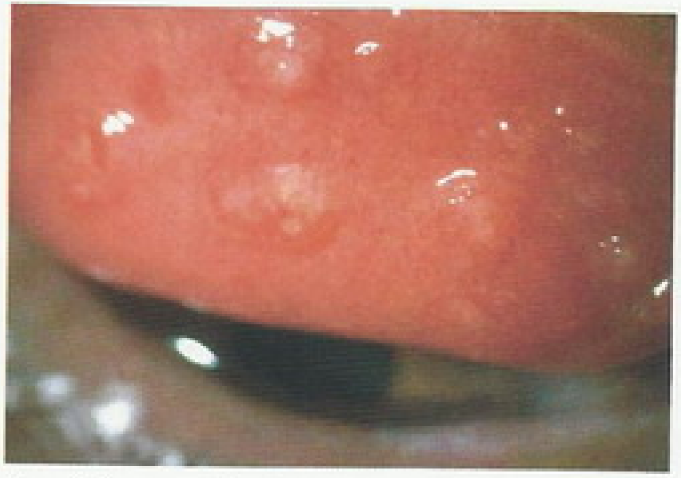
Everted upper lid showing follicular conjunctivitis (trachomatous follicles)



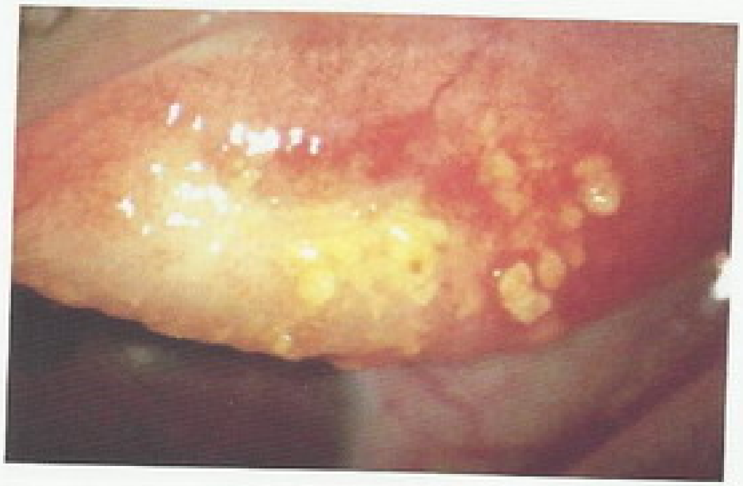
Everted upper lid showing follicular conjunctivitis (trachomatous follicles)



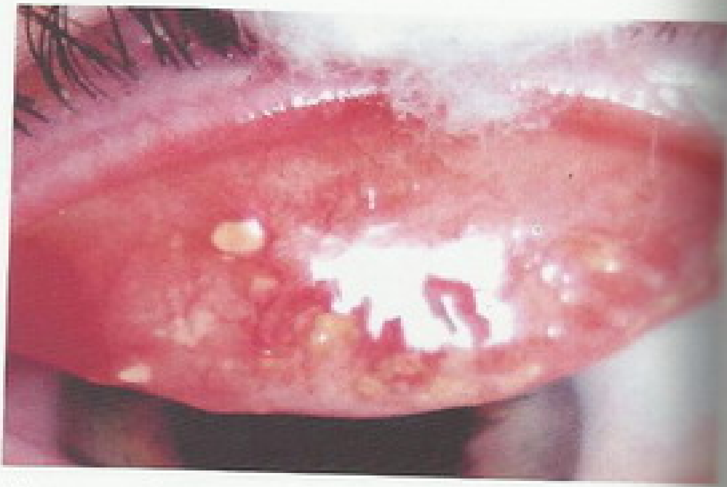
Everted upper lid showing follicular conjunctivitis (trachomatous follicles)



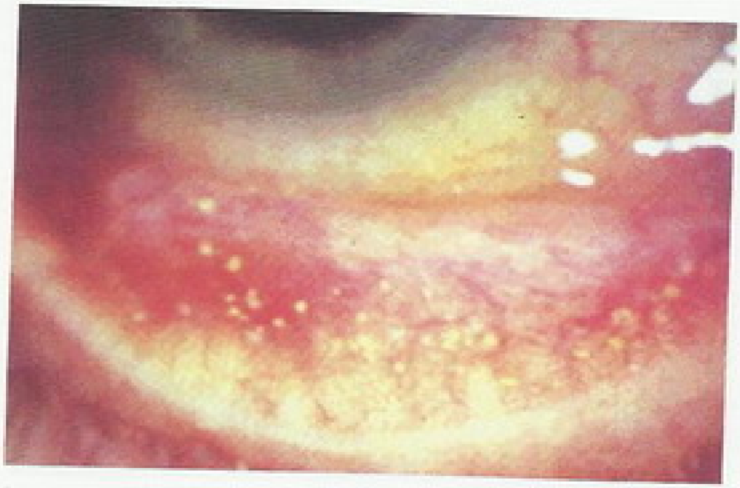
Everted upper lid showing mature trachomatous follicles



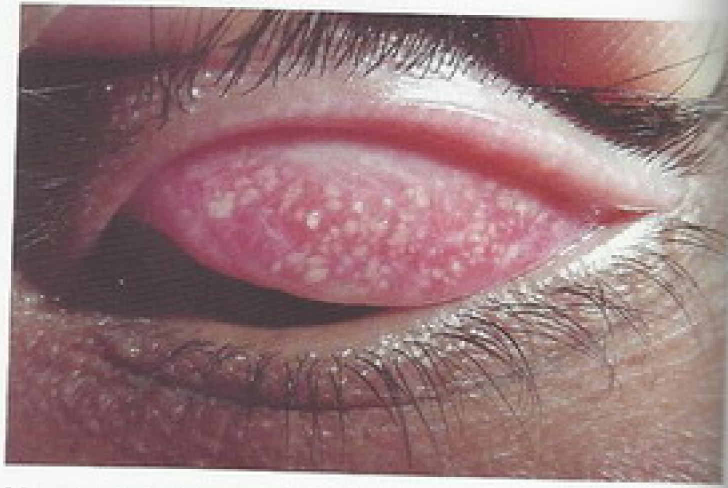
Everted upper lid showing upper palpebral conj. PTDs



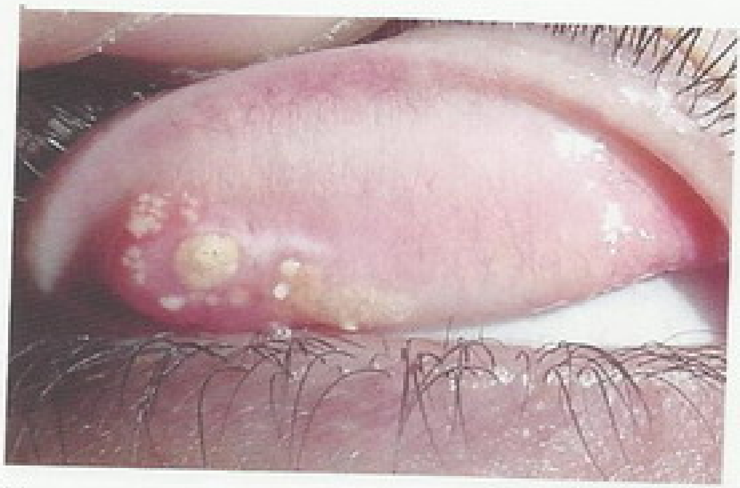
Upper palpebral conj. PTDs



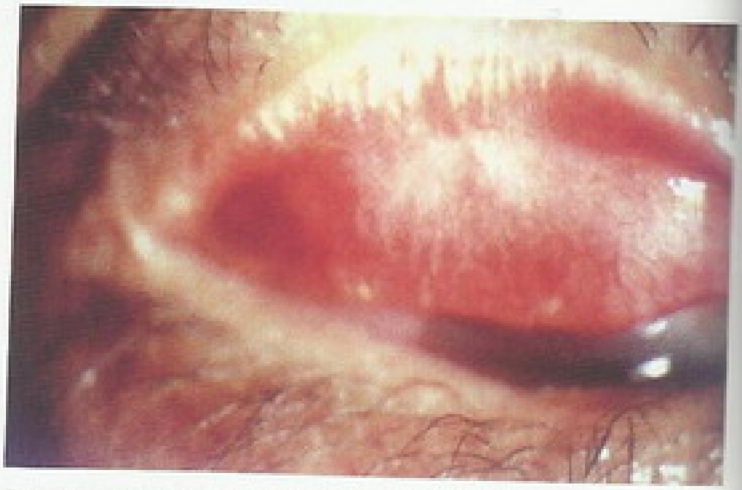
Lower palpebral conj PTDs (concretions)



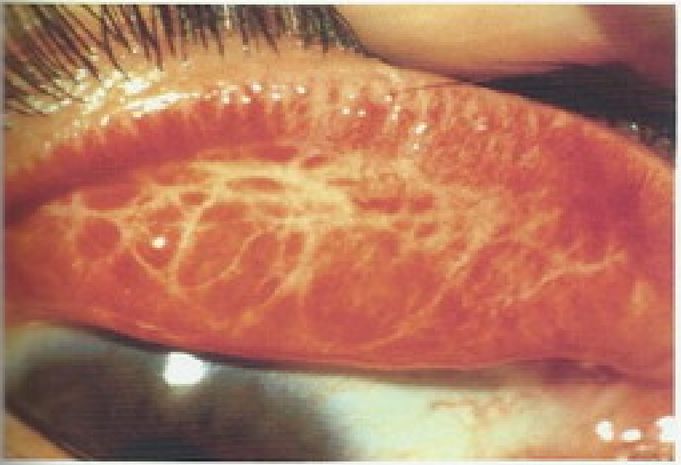
Upper palpebral conj. PTDs



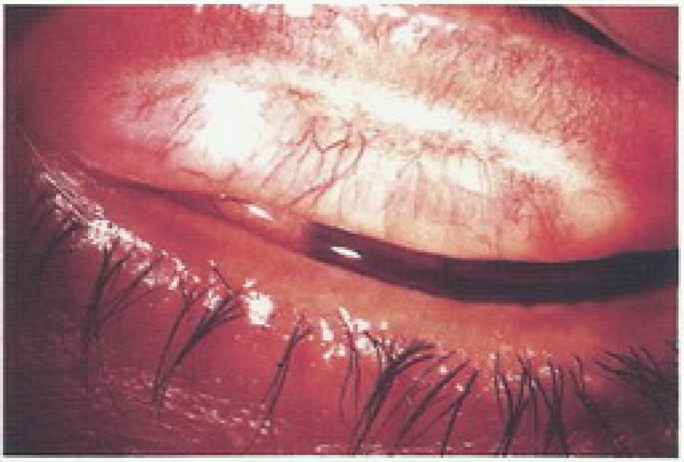
Upper palpebral conj. PTDs



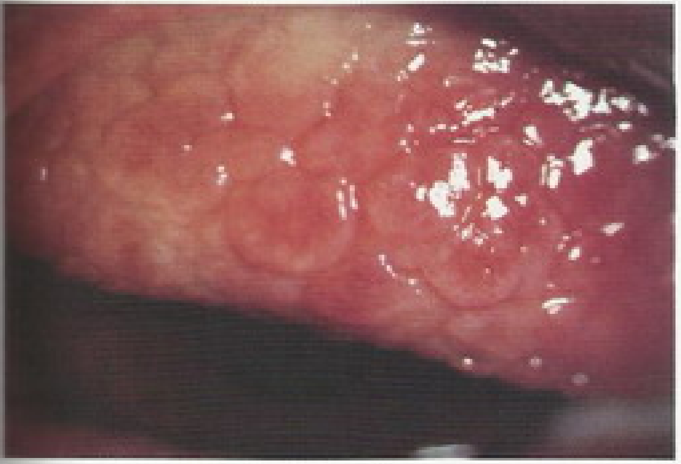
Everted upper lid showing Arlet's line



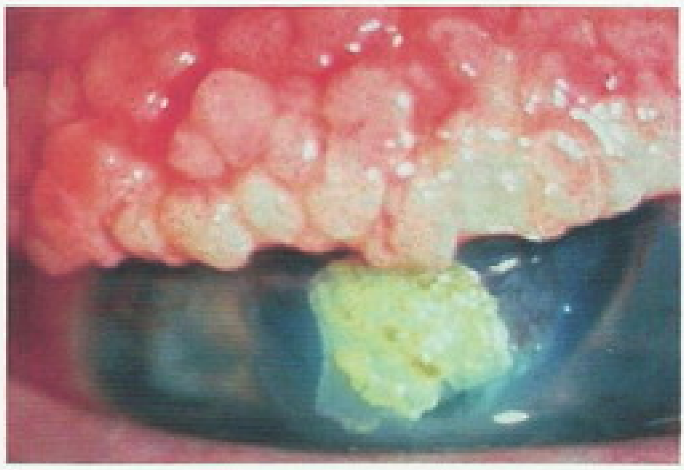
T3 Healed trachoma (white patches of fibrosis)



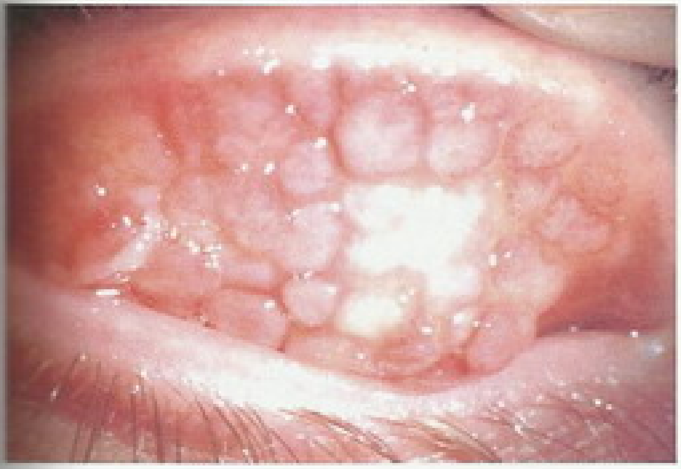
Arlet's line with conjunctival scarring due to trachoma



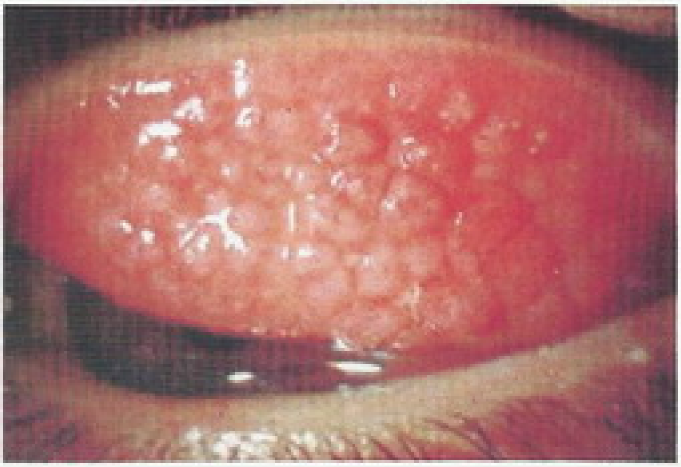
Everted upper lid showing cobble stone papillae in vernal conjunctivitis (palpebral spring catarrh)



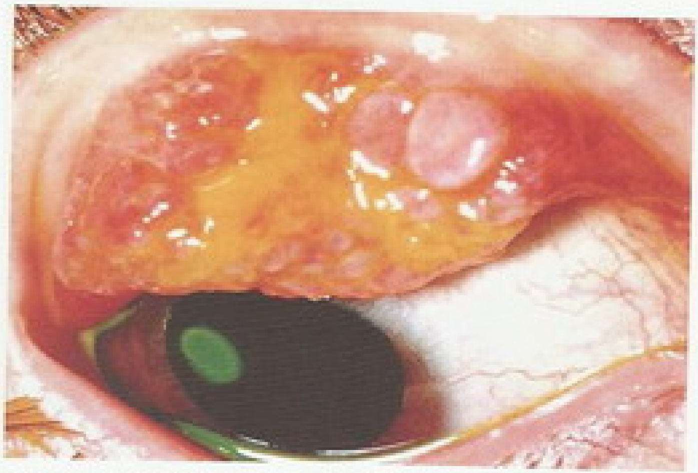
Palpebral spring catarrh with shield corneal ulcer



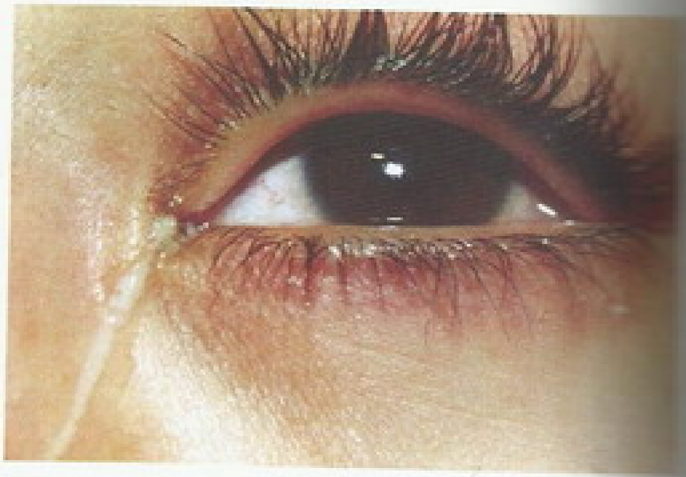
Palpebral spring catarrh



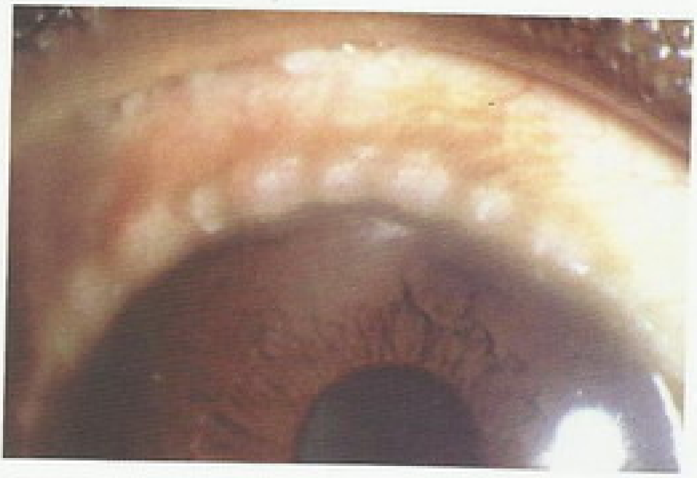
Palpebral spring catarrh



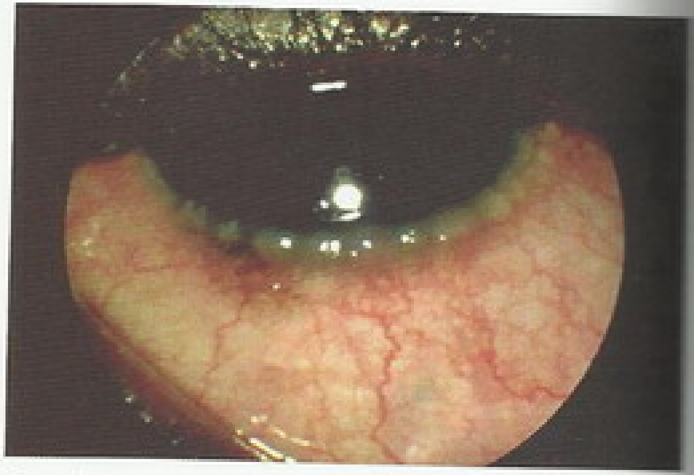
Palpebral spring catarrh with corneal ulcer



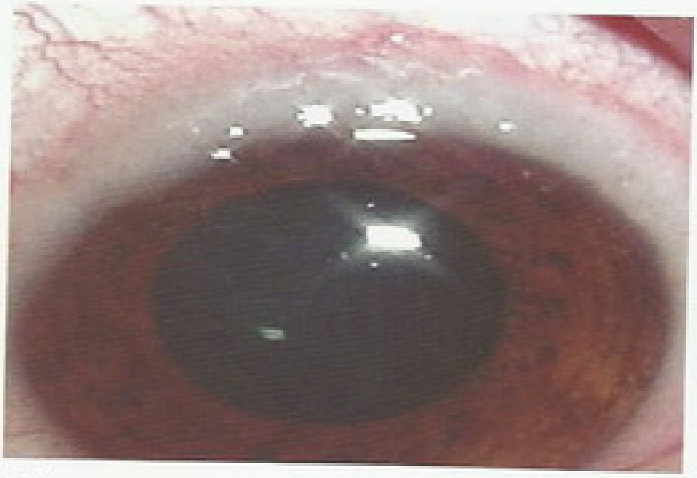
Roby ,sticky discharge in spring catarrh



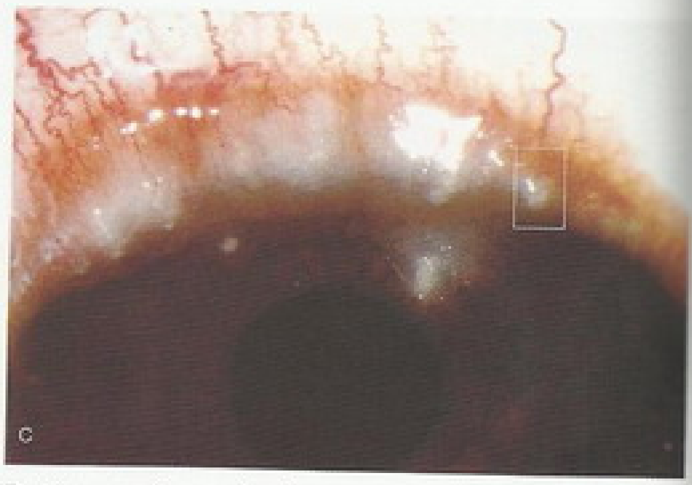
Tranta spots in bulbar spring catarrh



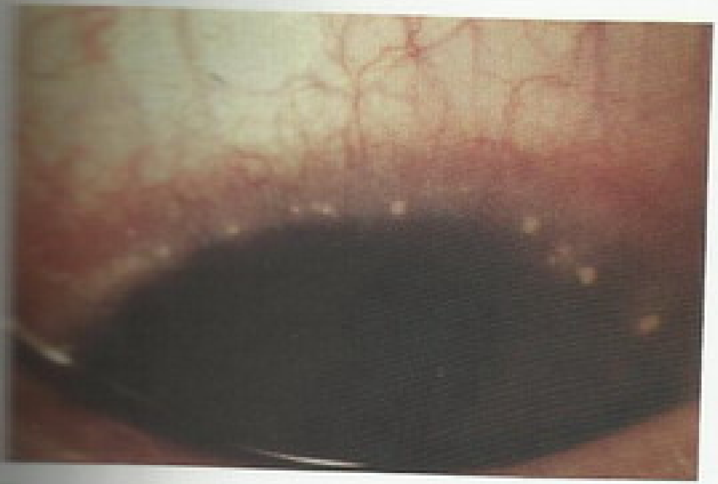
Tranta spots in bulbar spring catarrh

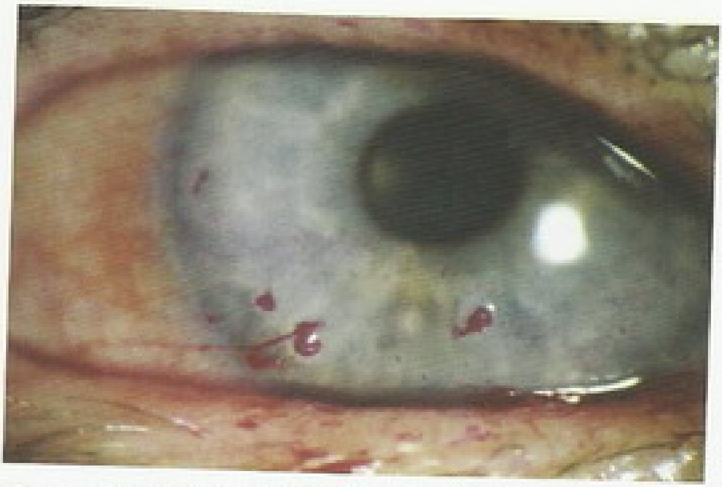


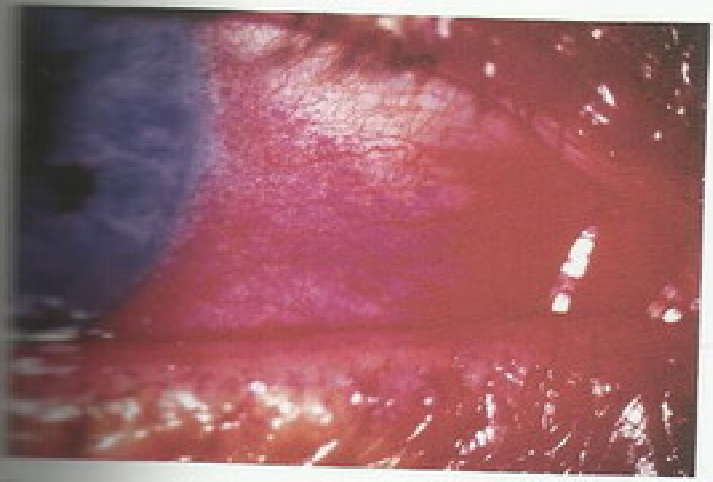
Bulbar spring catarrh

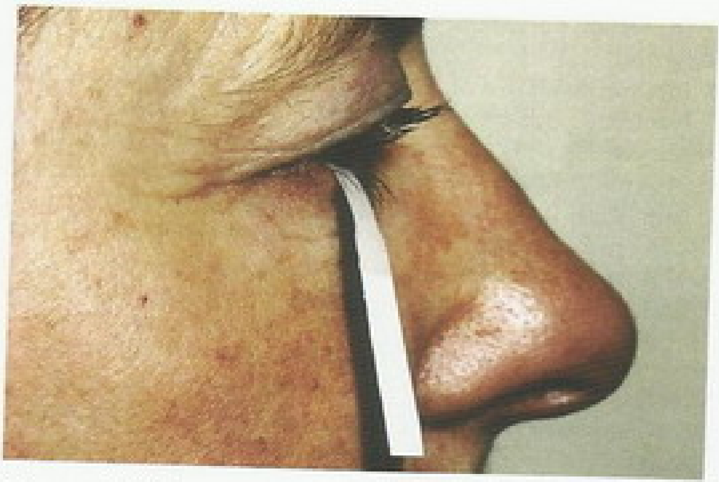


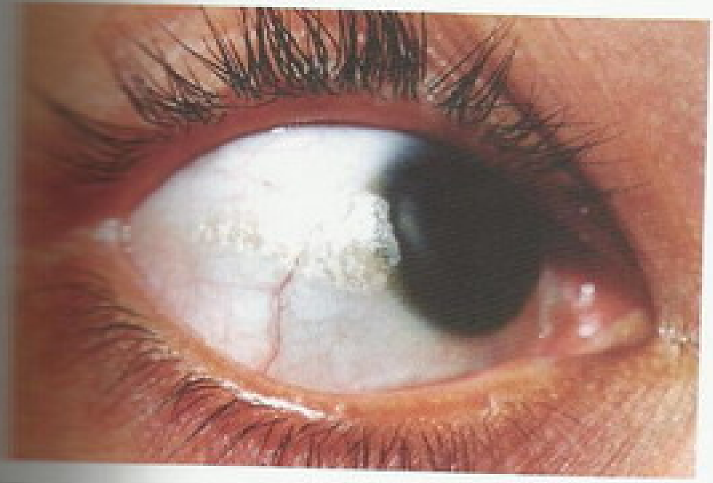
Bulbar spring catarrh

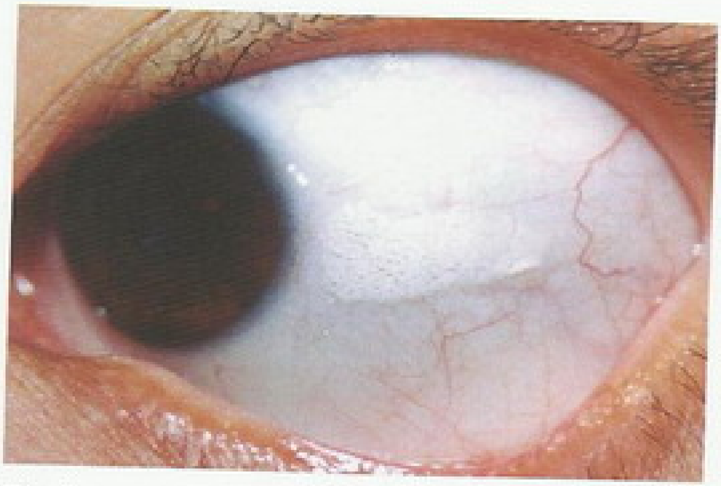

Bulbar spring catarrh with tranta's spots

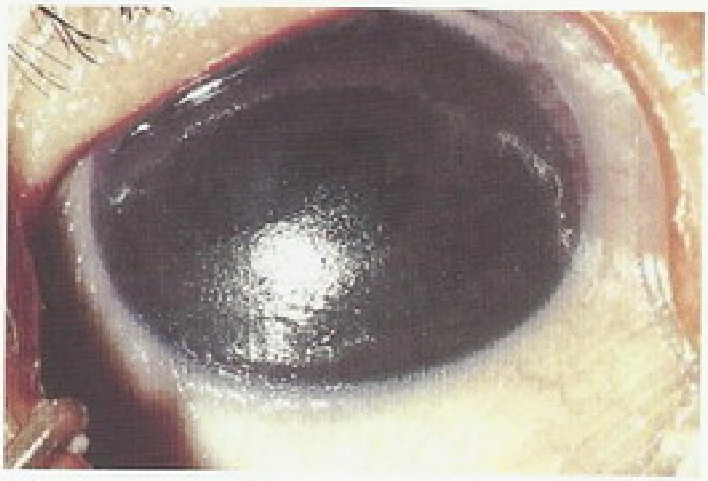

Xerosis (kerato-conjunctivitis sicca) stained with rose Bengal


Severe xerosis (kerato-conjunctivitis sicca) stained with rose Bengal

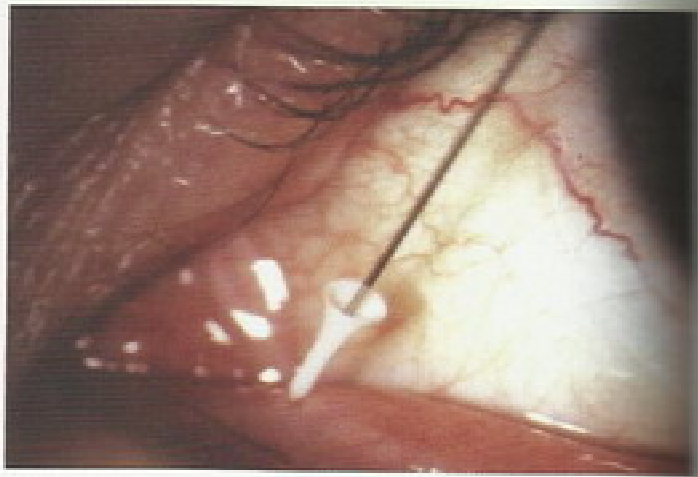

Normal Schirmer's test (more than 10 mm in 5 min)


Bitot's spots of xerosis (Foamy looking plaque temporal to the limbus)

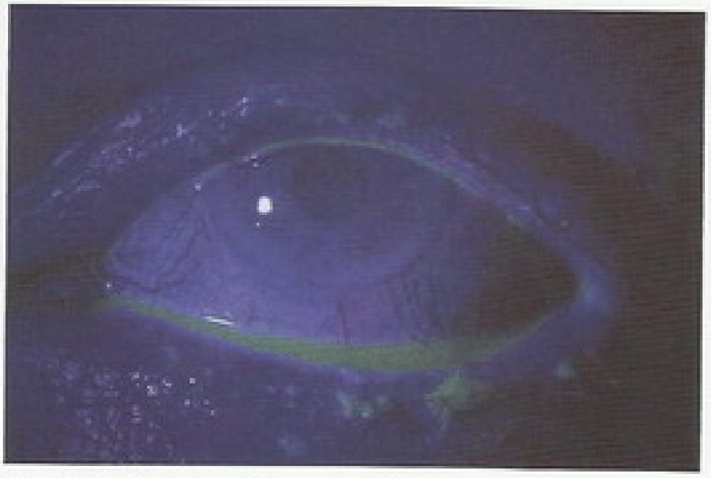

Bitot's spots of xerosis



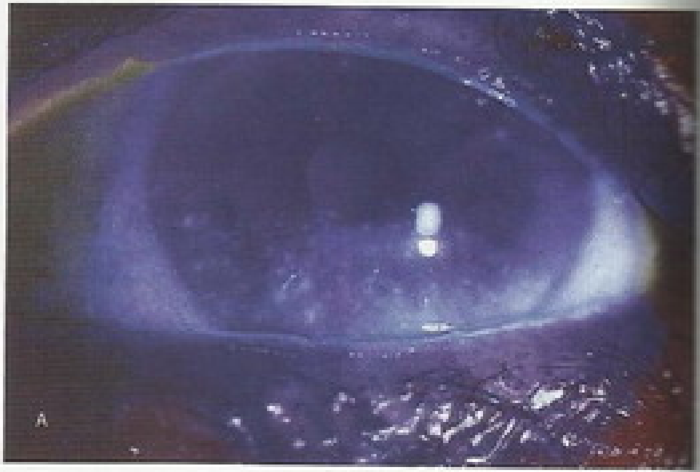
loss of corneal luster in case of xerosis



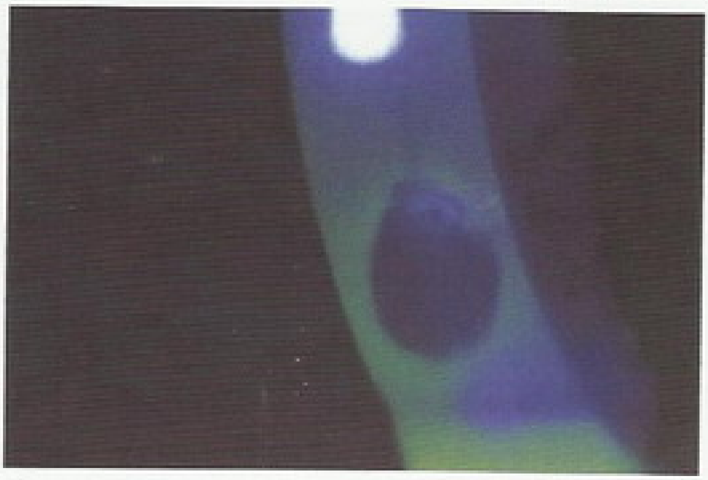
Punctal occlusion by sillicon plug for tear preservation in case of xerosis



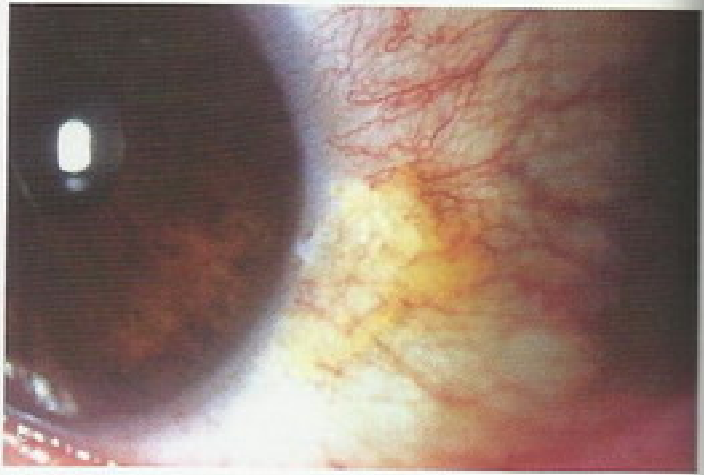
Marginal tear meniscus stained with fluorescein



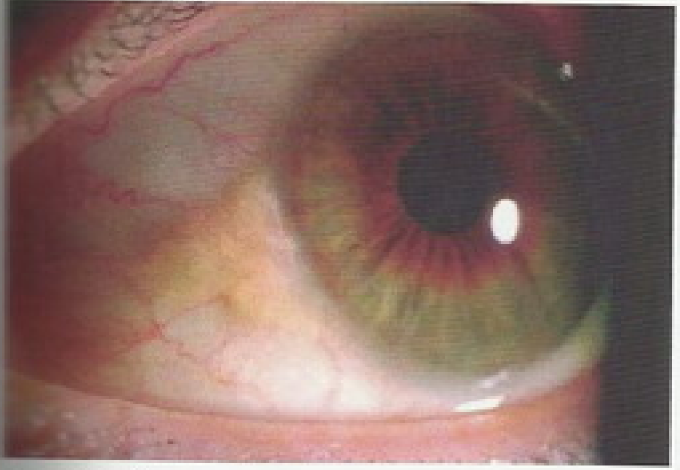
Thin marginal tear meniscus& punctate erosions in dry eye



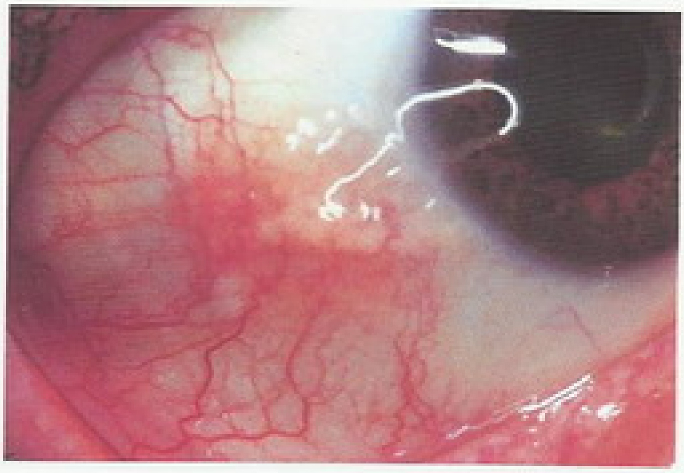
Tear film break up time test BUT (dry spot appears in fluorescein stained tear film)



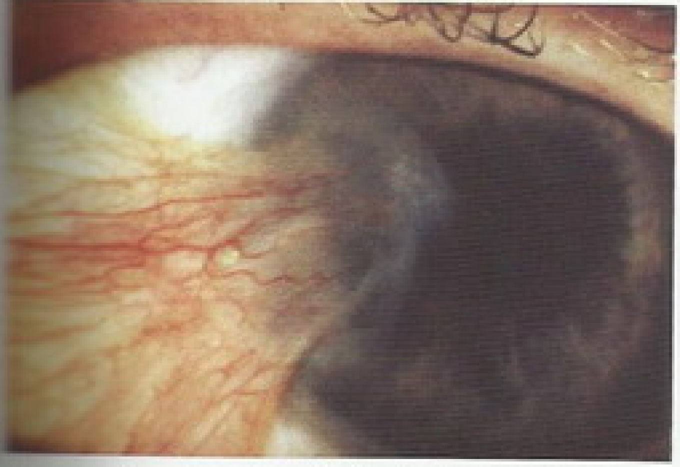
Pinguecula



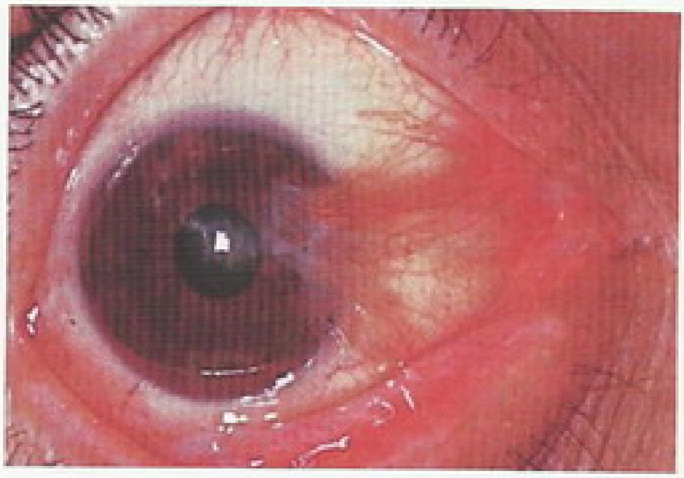
Pinguecula



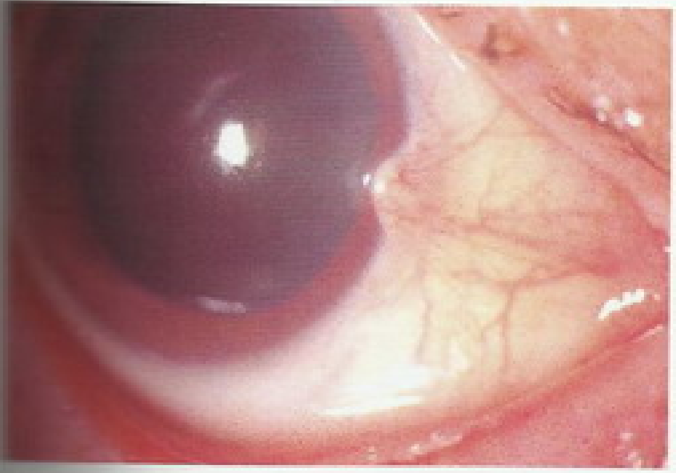
Pinguecula



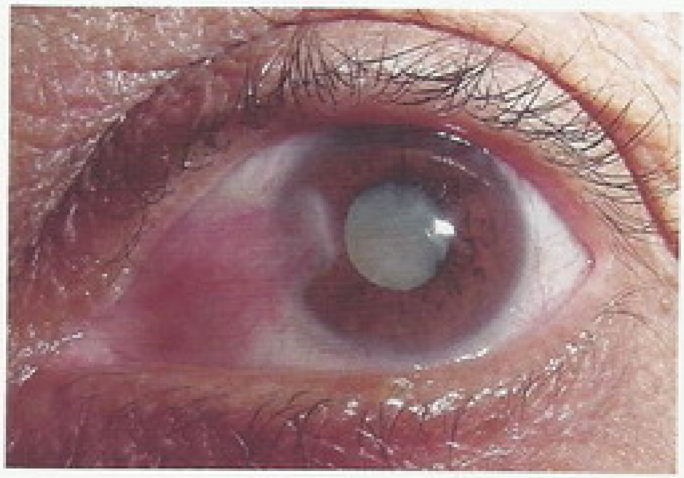
Progressive pterygium (note the infiltration cape at the apex)



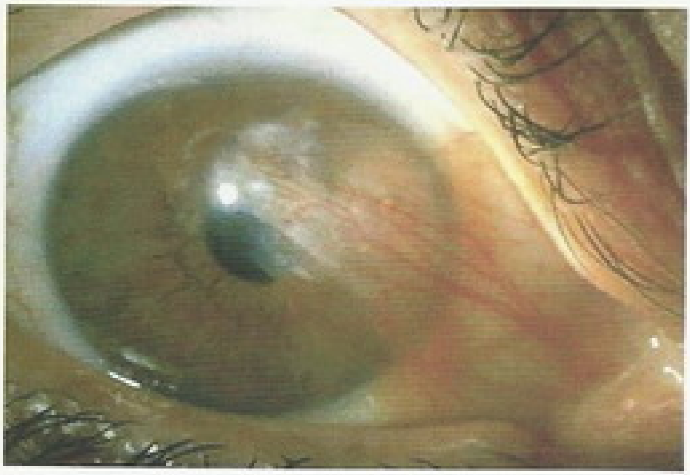
Stationary pterygium



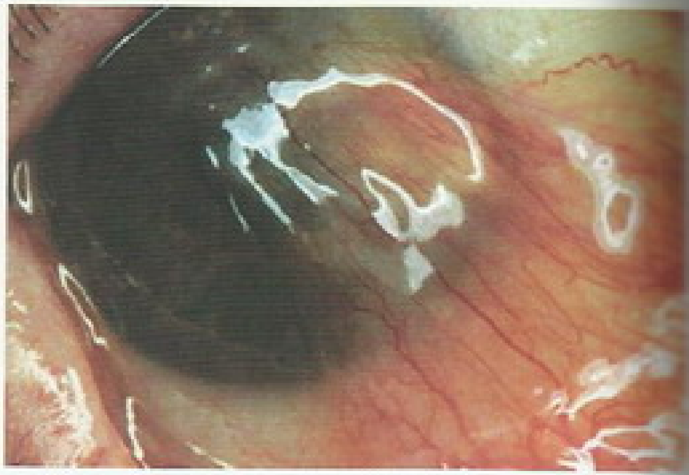
Early pterygium



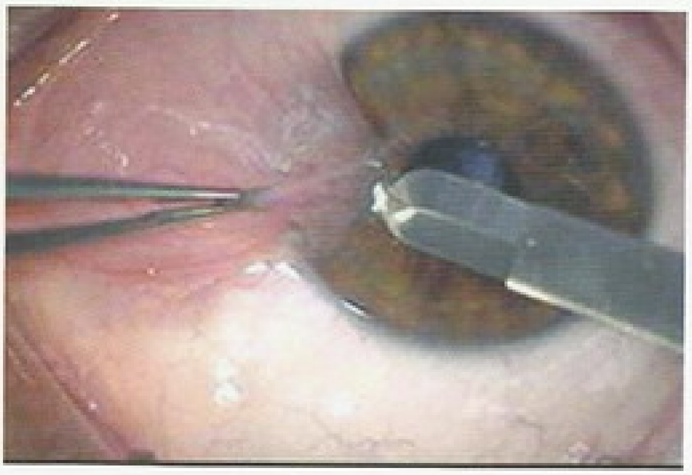
Pterygium with cataract



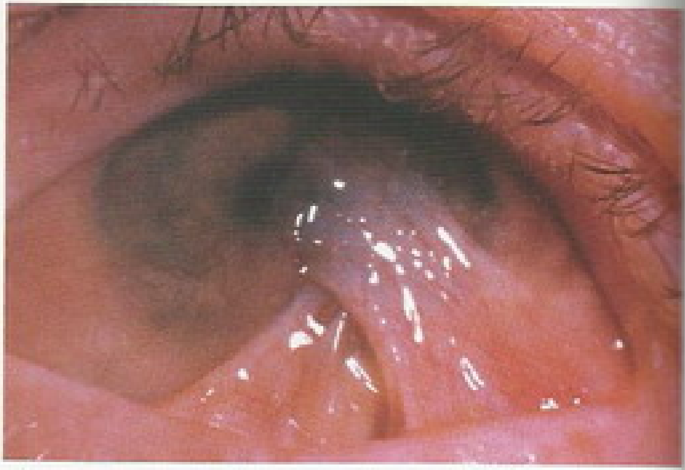
Advanced pterygium covering the pupil



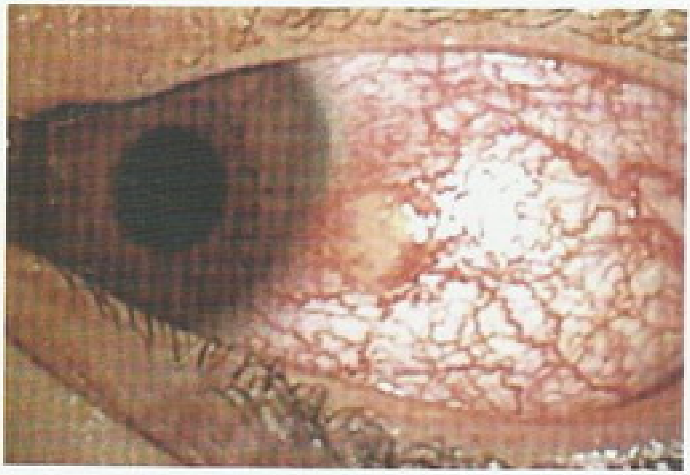
Advanced pterygium covering the pupil



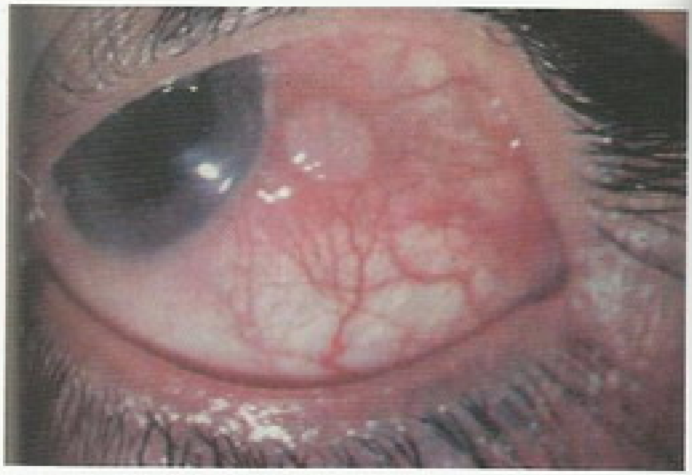
Pterygium operation



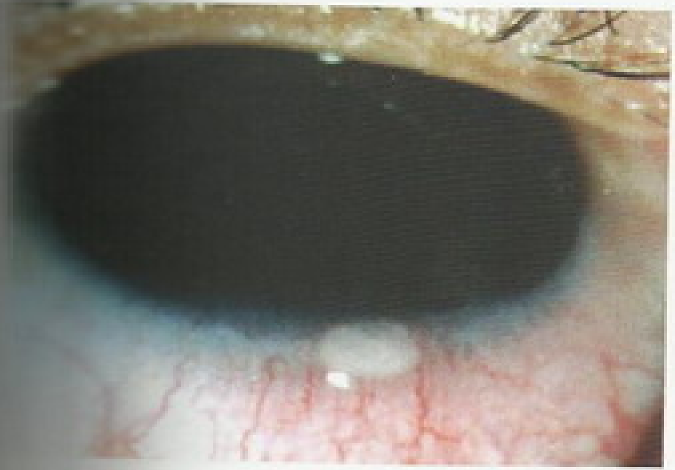
Pseudo-pterygium



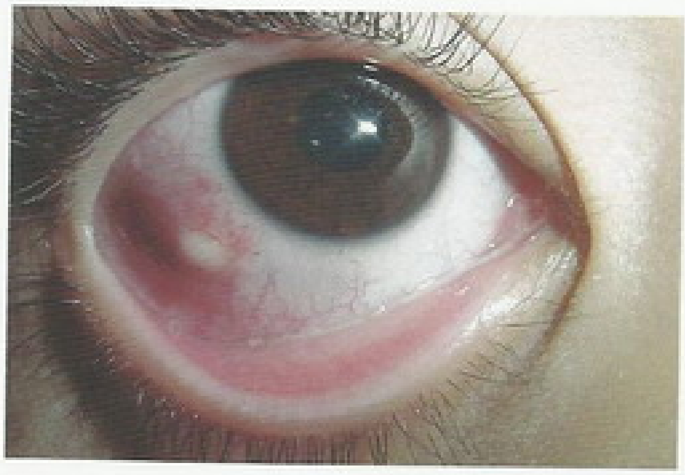
onjuctival phlycten



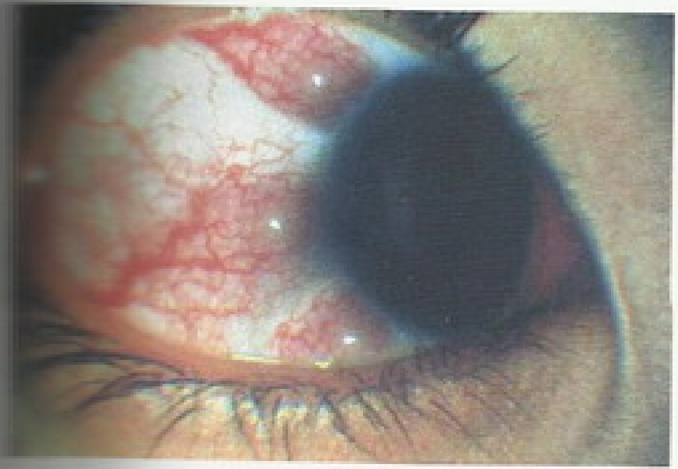
Conjuctival phlycten



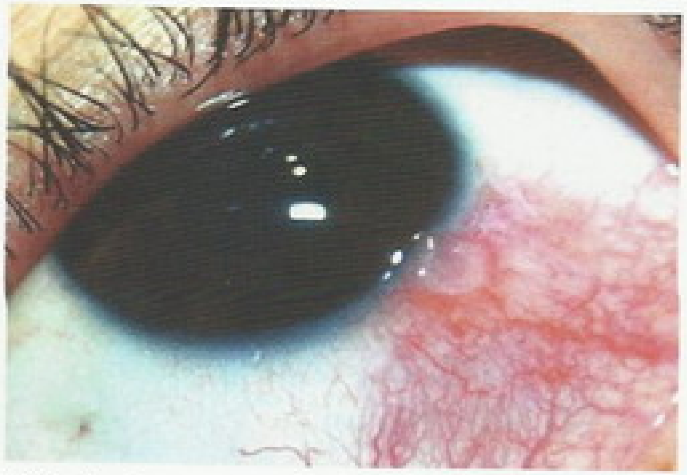
Limbal phlycten



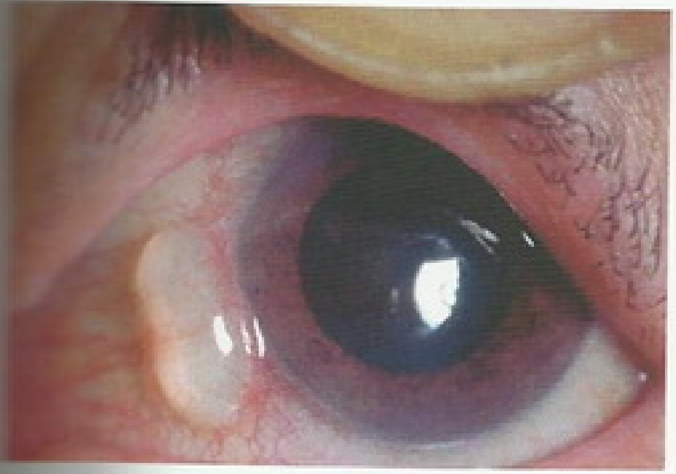
Conjuctival phlycten



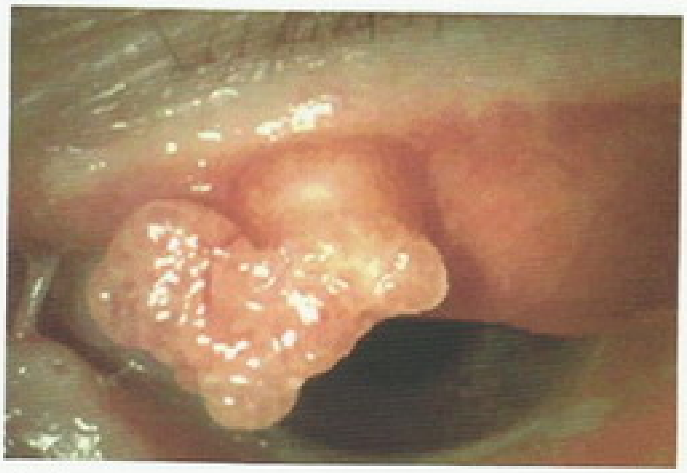
Multiple limbal phlycten



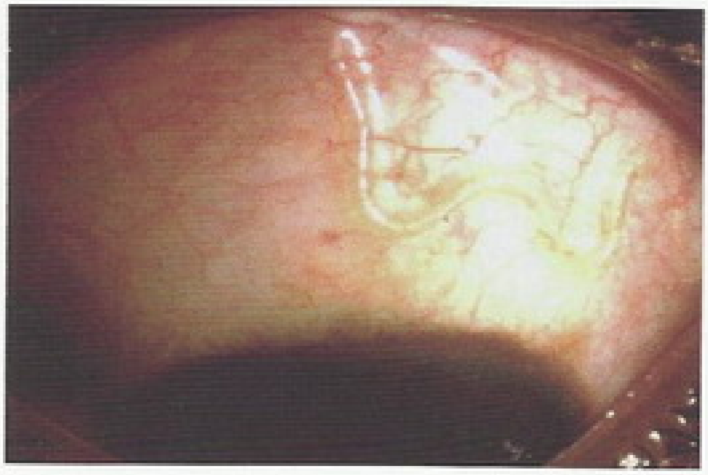
Limbal phlycten



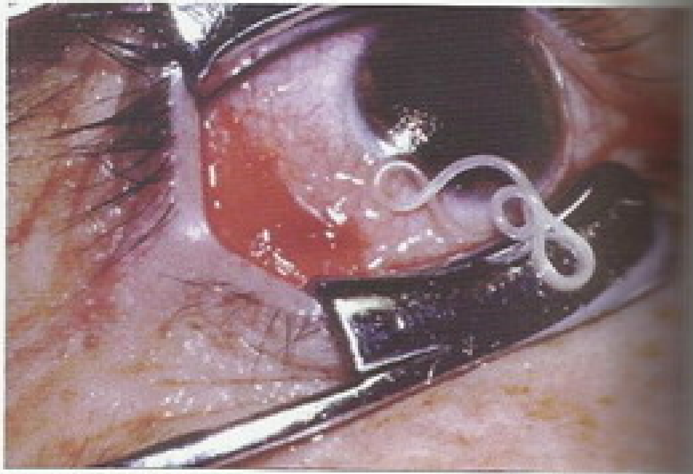
Conjuctival retention cyst due to occlusion of accessory lacrimal glands ducts



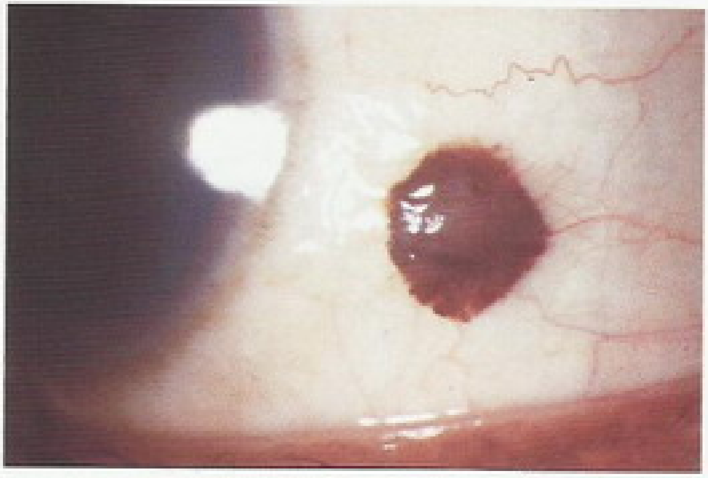
Conjunctival papilloma



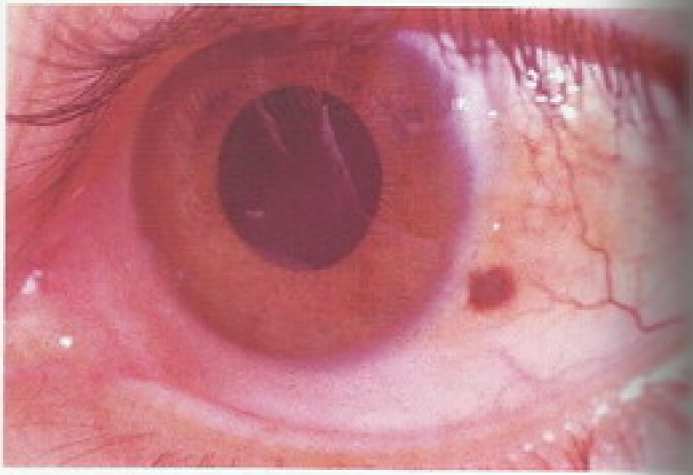
Loa Loa worm in the conjuctiva



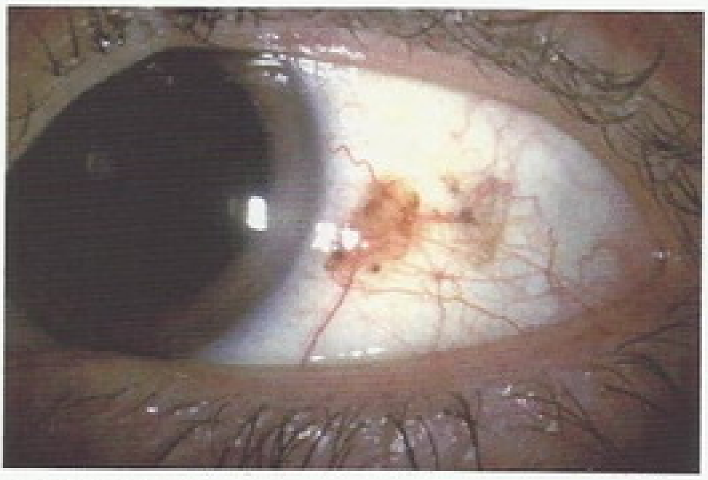
Loa Loa worm in the conjuctiva



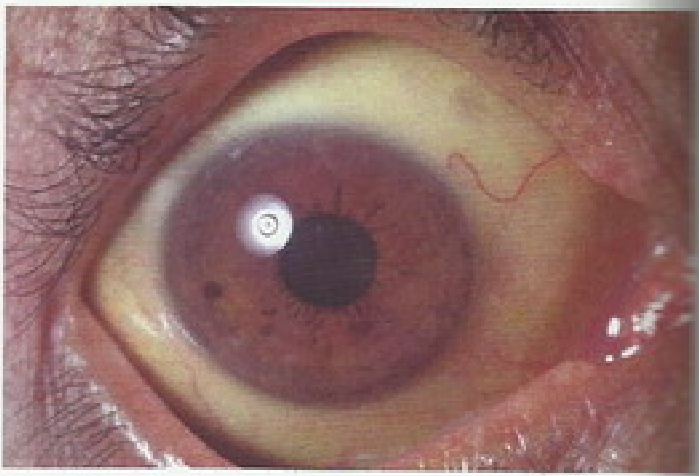
Conjunctival naevus



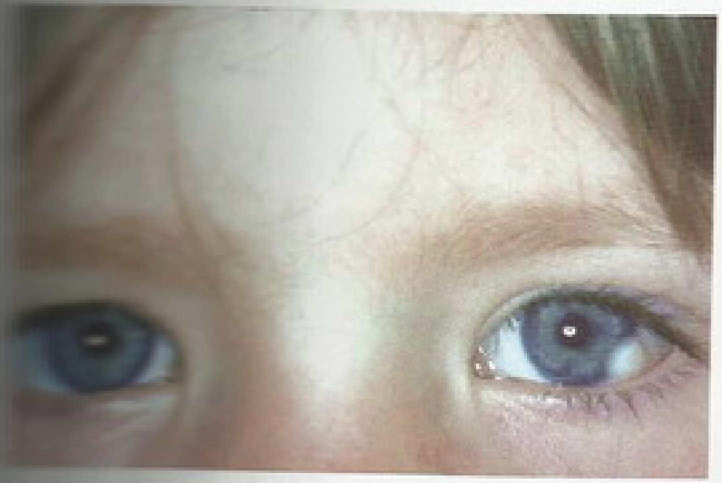
Conjunctival naevus



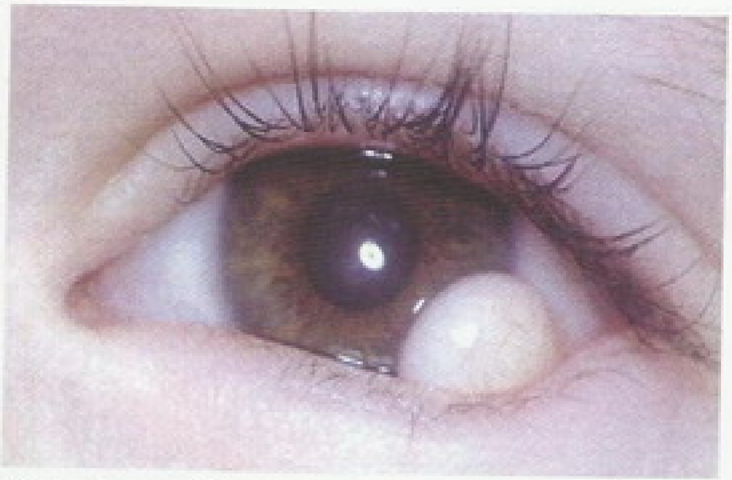
Conjunctival naevus



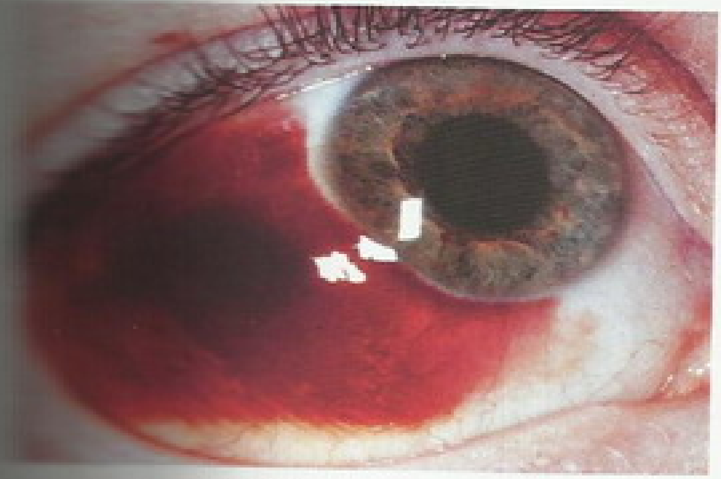
Jaundice (yellow eye)



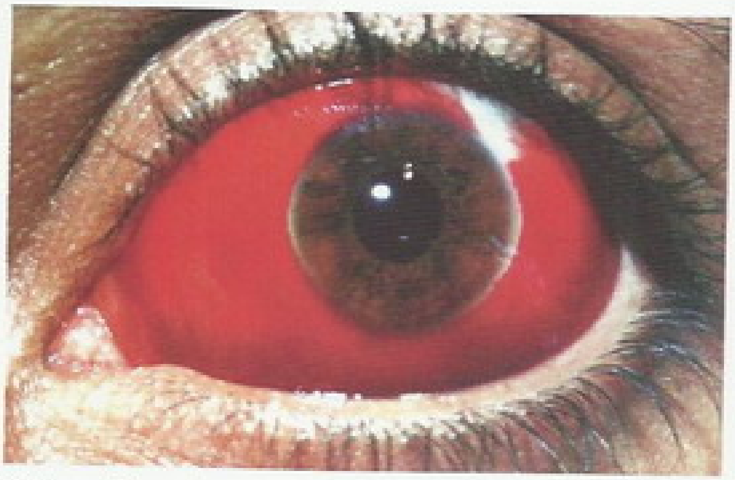
Limbal dermoid



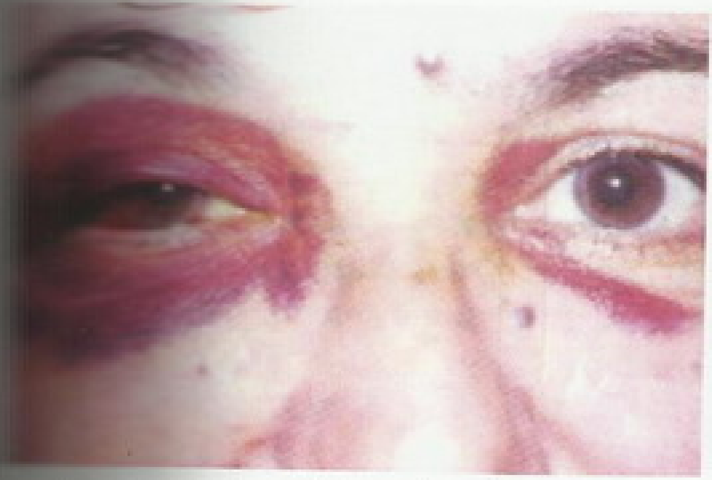
Limbal dermoid



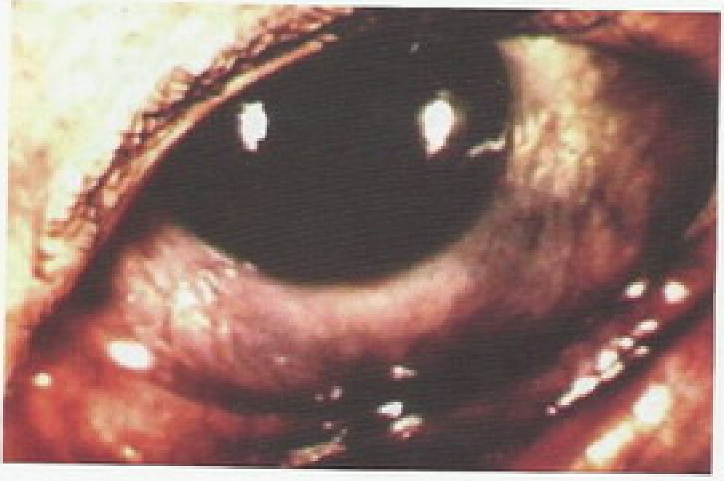
Subconjunctival Hge



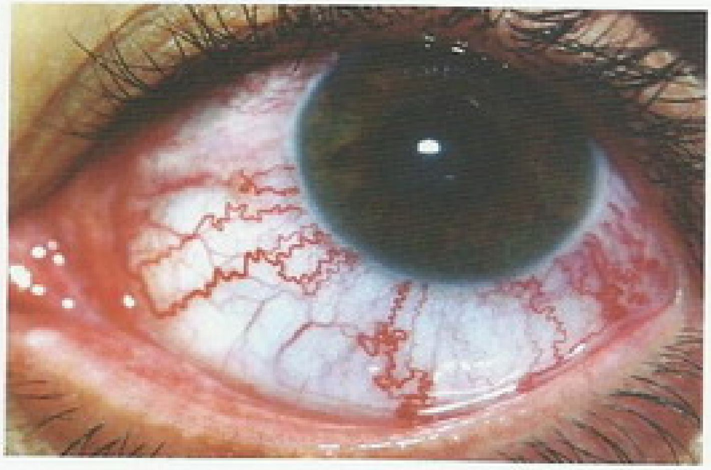
Subconjunctival Hge



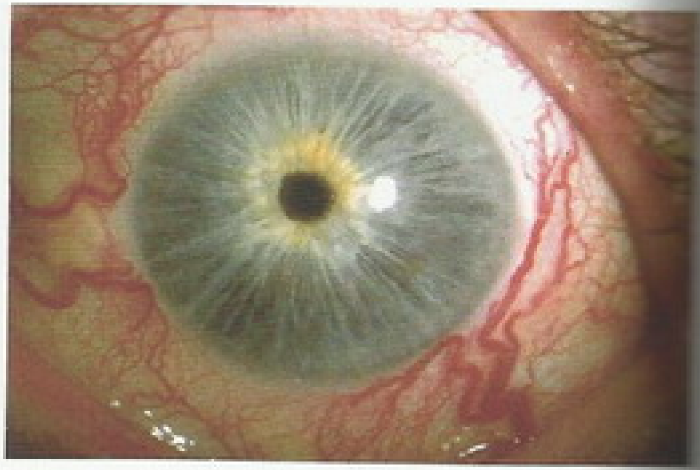
Bilateral periocular ecchymosis with right subconjunctival Hge



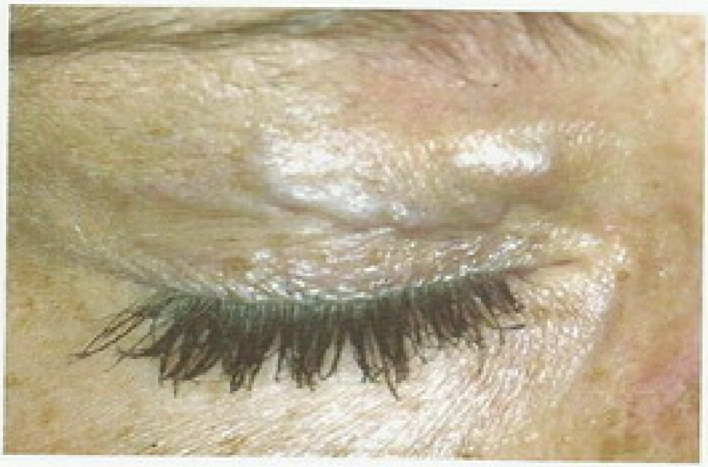
Argyrosis due to topical use of silver nitrites



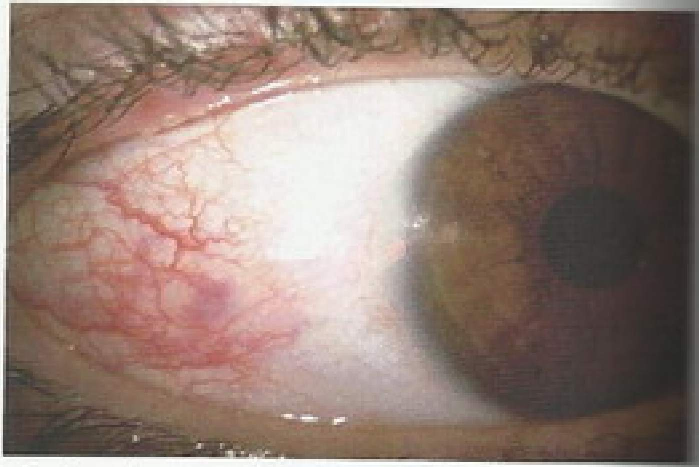
Telangectasia (A.V. fistula)



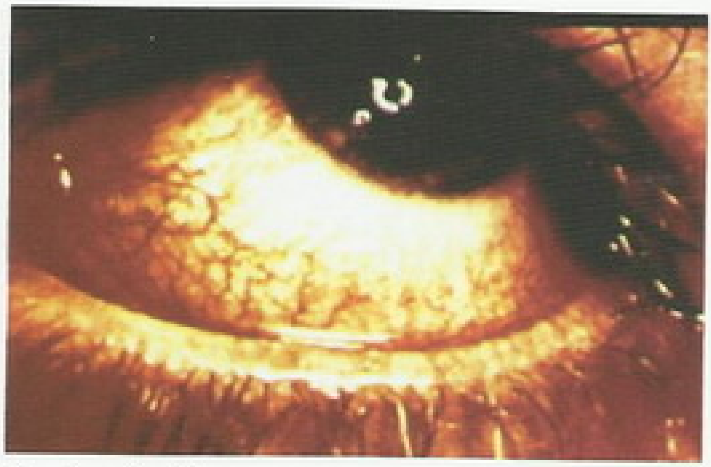
Telangectasia (A.V. fistula)



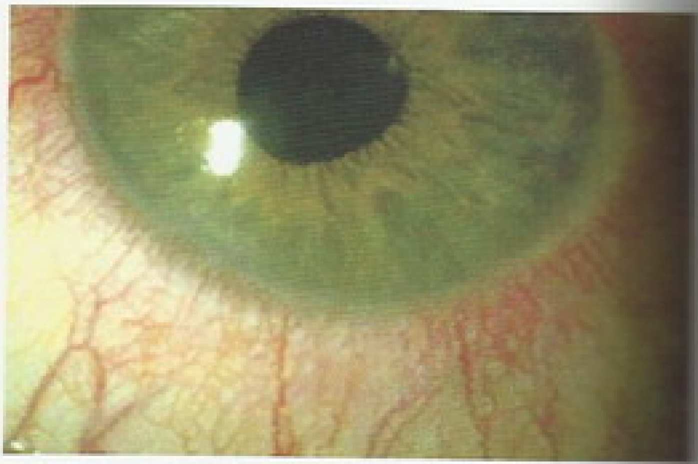
Lid varices due to A. V. fistula



Conjunctival hyperemia

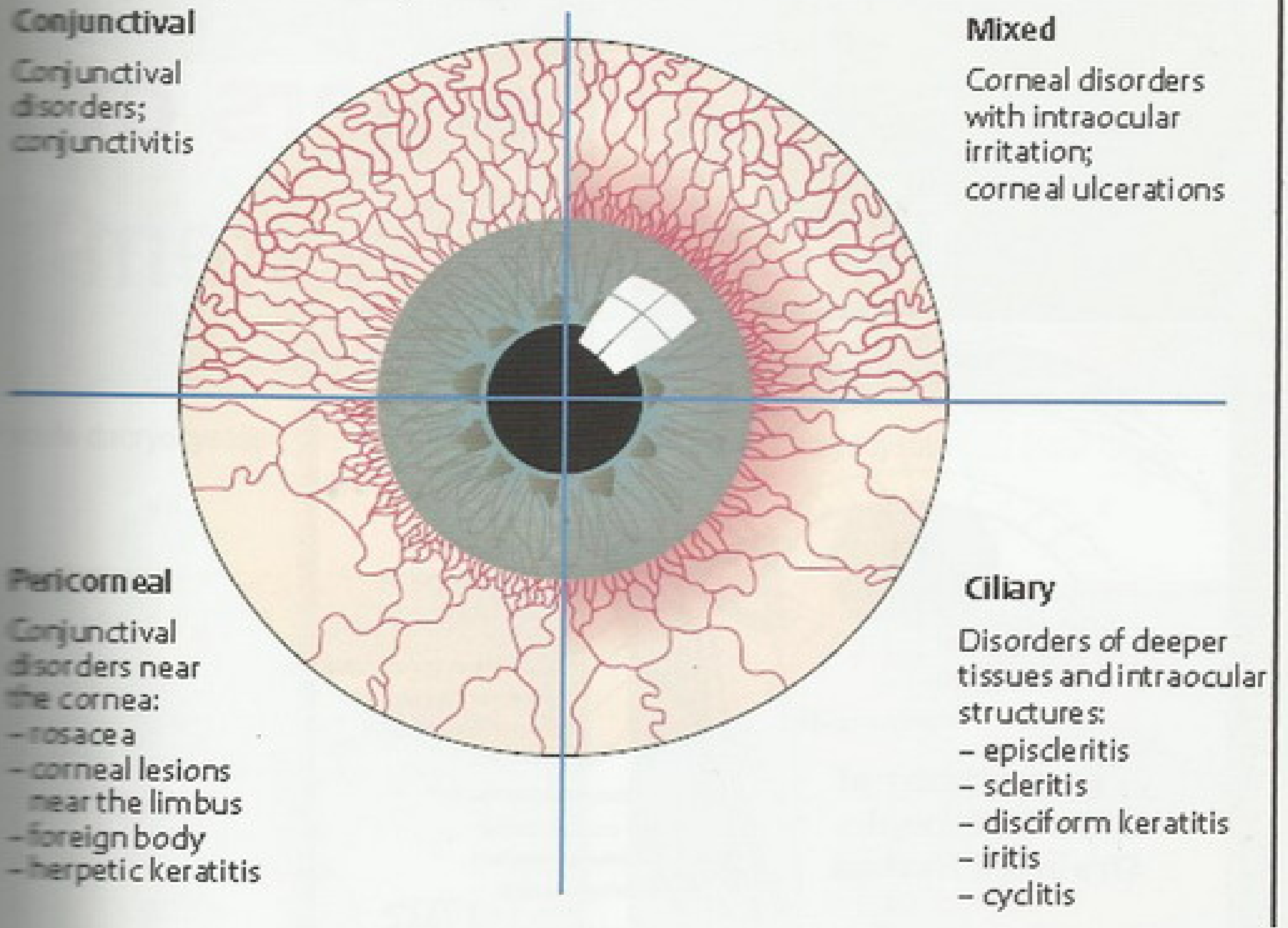


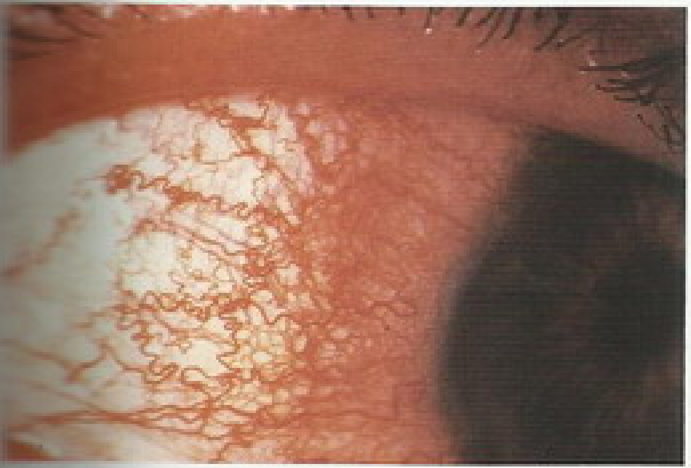
Conjunctival hyperemia



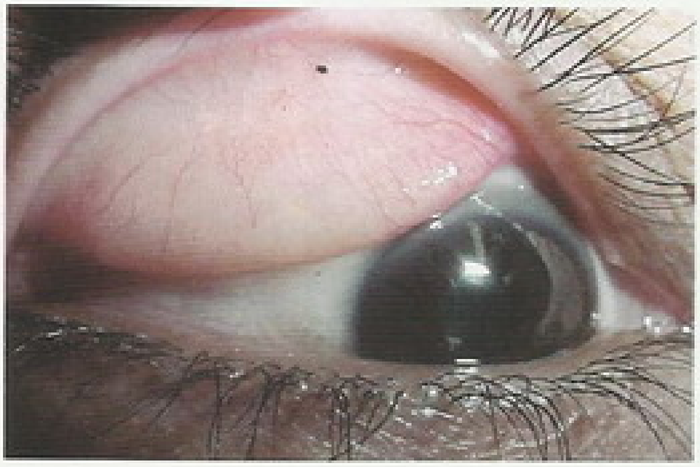
Ciliary injection

Forms of conjunctival injection.


Conjunctival
Conjunctival disorders; conjunctivitis
Mixed
Corneal disorders with intraocular irritation; corneal ulcerations
Pericorneal
Conjunctival disorders near the cornea:
– rosacea
– corneal lesions near the limbus
– foreign body
– herpetic keratitis
Ciliary
Disorders of deeper tissues and intraocular structures:
– episcleritis
– scleritis
– disciform keratitis
– iritis
– cyclitis



Ciliary injection



Everted upper lid showing F.B in the sulcus-subtarsalis

Chapter 3

Disorders of Lacrimal system

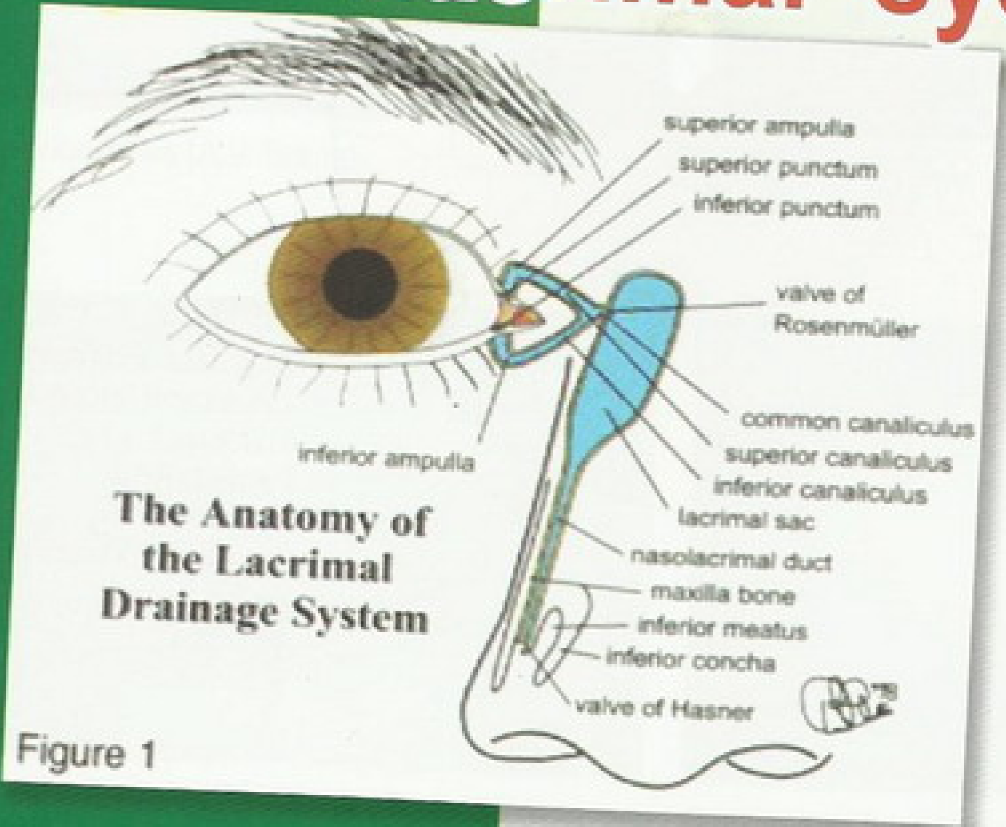
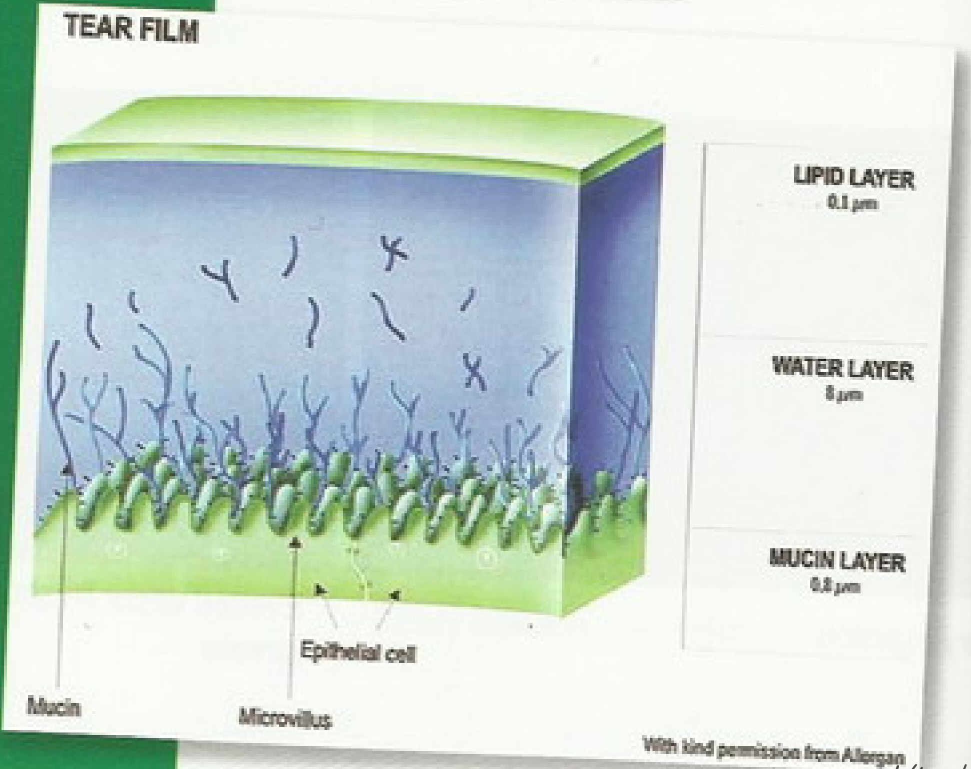
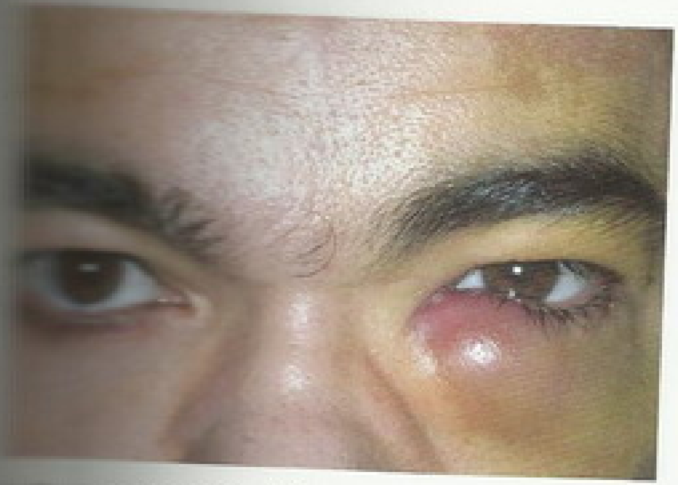

superior ampulla
superior punctum
inferior punctum
valve of Rosenmüller
common canaliculus
superior canaliculus
inferior canaliculus
lacrimal sac
nasolacrimal duct
maxilla bone
inferior meatus
inferior concha
valve of Hasner
inferior ampulla
The Anatomy of the Lacrimal Drainage System

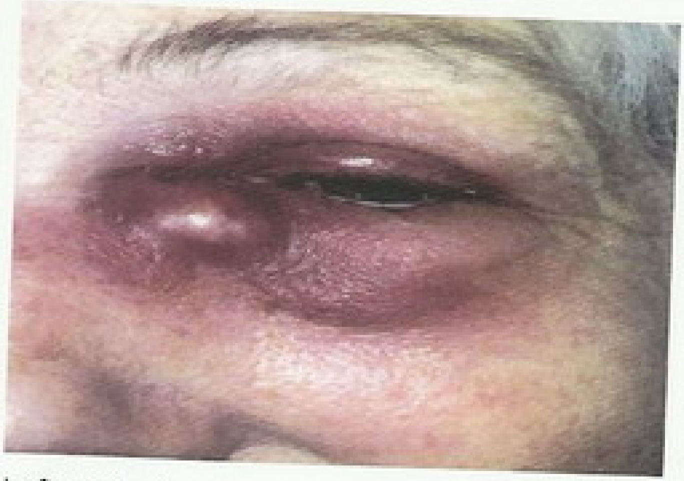
Figure 1


TEAR FILM
LIPID LAYER
0.1 µm
WATER LAYER
8 µm
MUCIN LAYER
0.8 µm
Epithelial cell
Mucin
Microvillus

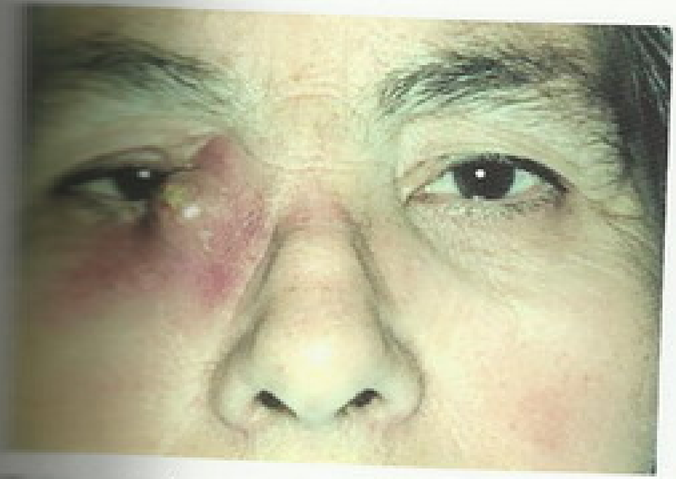
With kind permission from Allergan



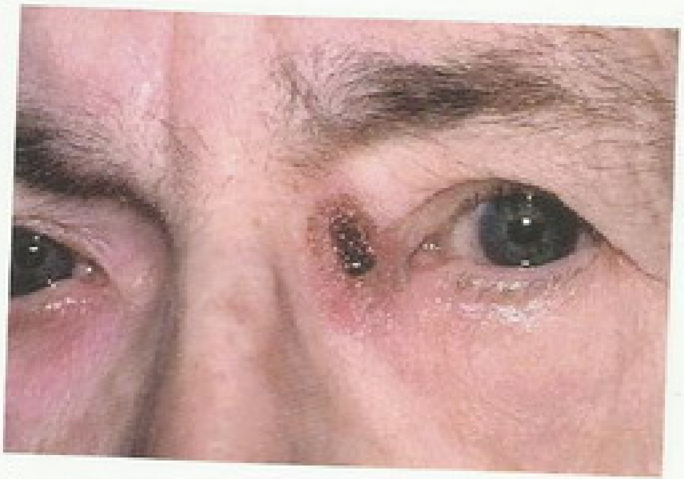
Left acute dacryocystitis



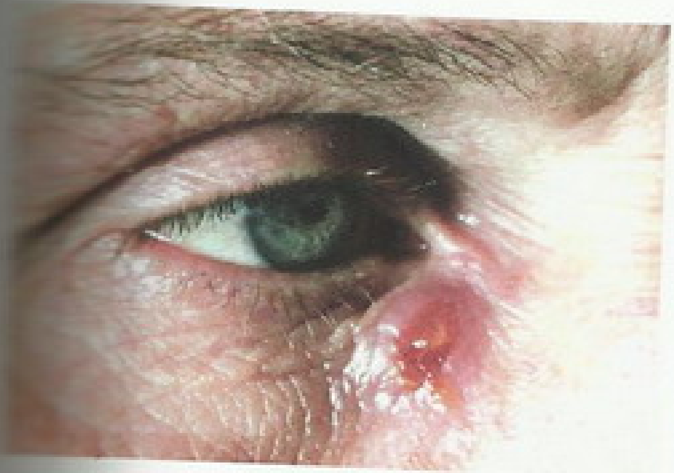
Left acute dacryocystitis



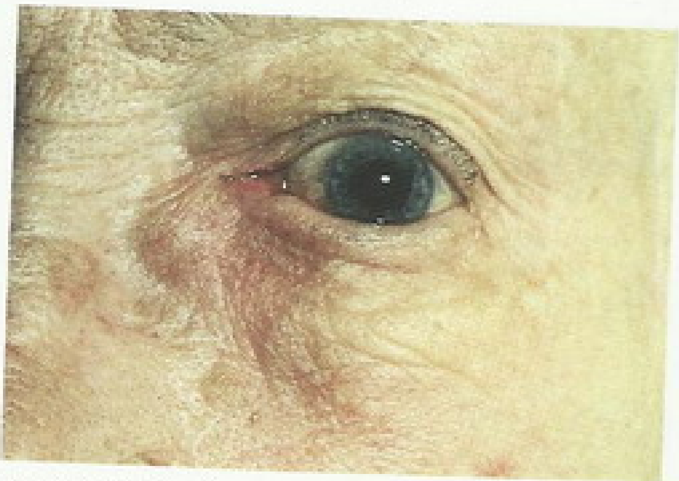
Right acute dacryocystitis



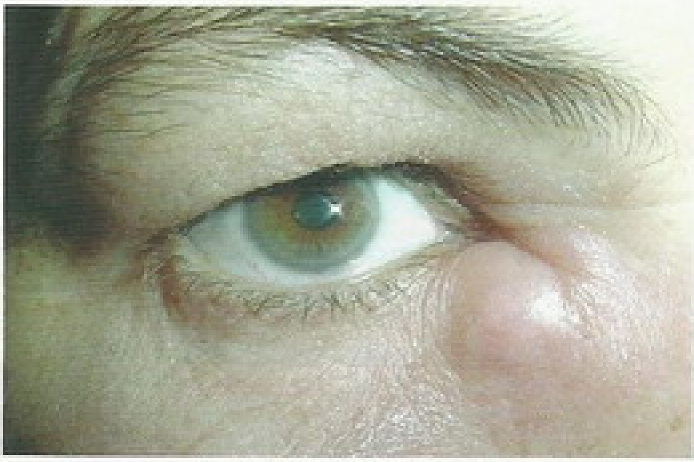
Acute dacryocystitis with lacrimal fistula



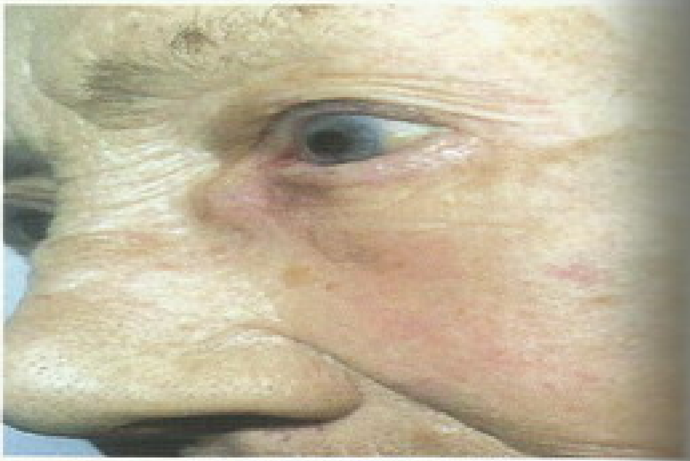
Acute dacryocystitis with lacrimal fistula



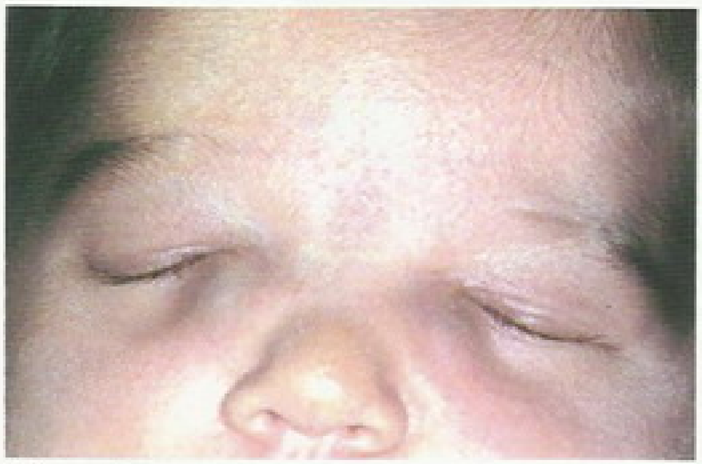
Adult chronic dacryocystitis (mucocele)



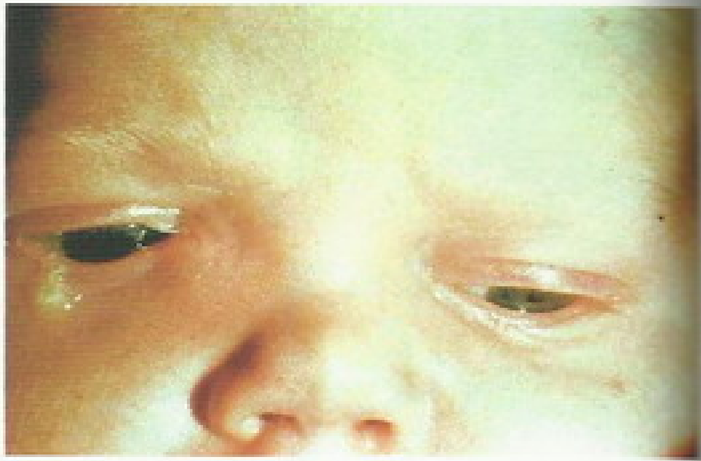
Adult chronic dacryocystitis (mucocele)



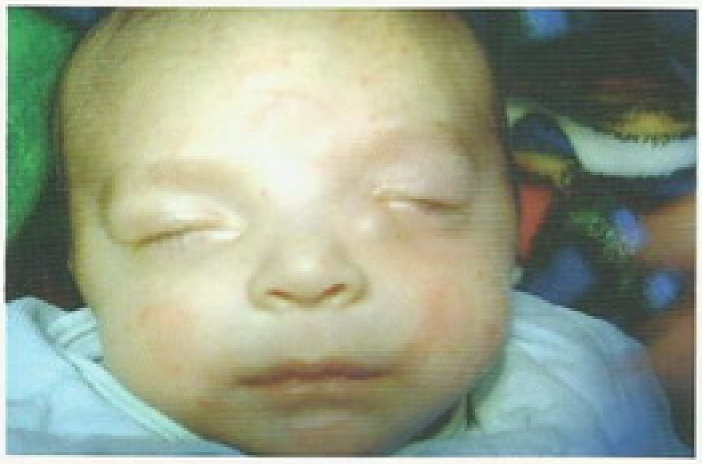
Adult chronic dacryocystitis (mucocele)



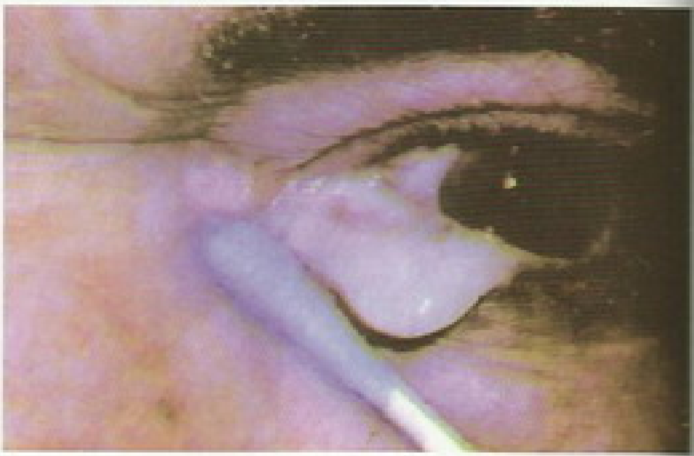
Bilateral congenital mucocele of the lacimal sac (amniocele)



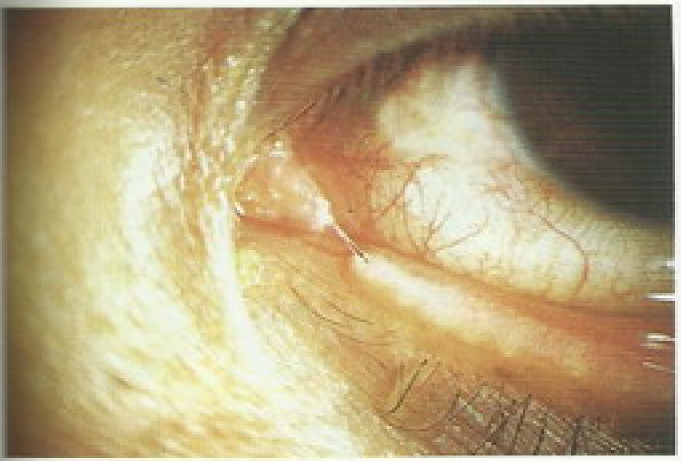
Congenital dacryocystitis (amniocele)



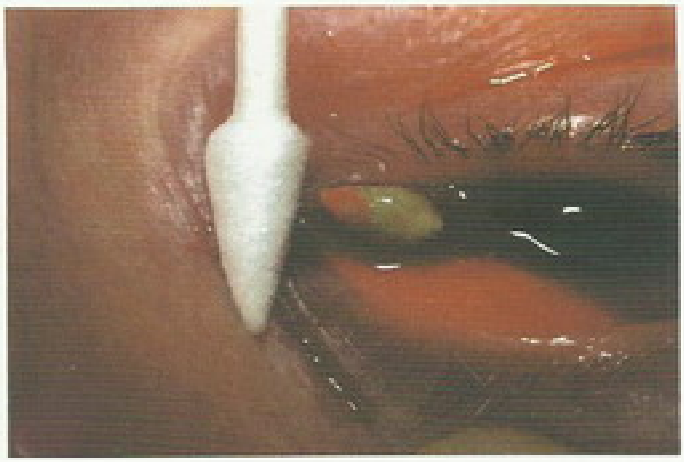
Bilateral congenital mucocele of the lacimal sac (amniocele)



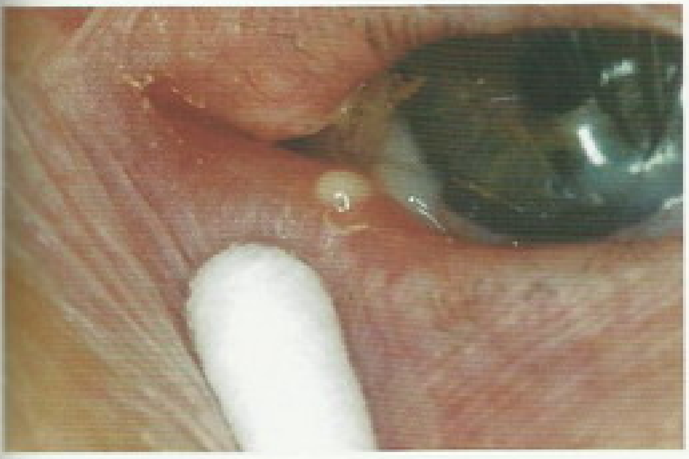
+ ve regurge test



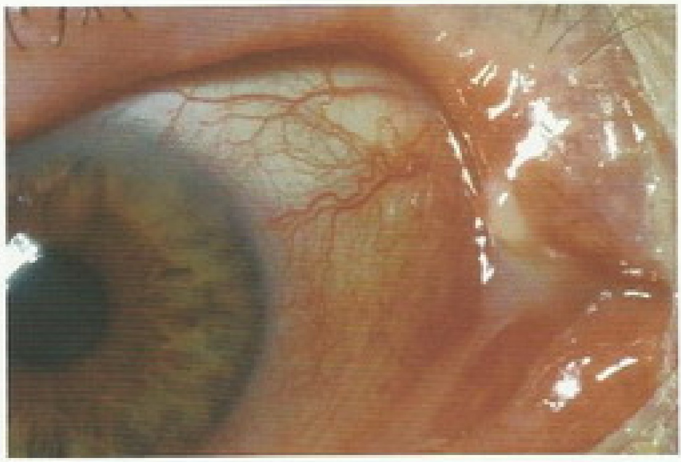
Punctal obstruction by an eye lash



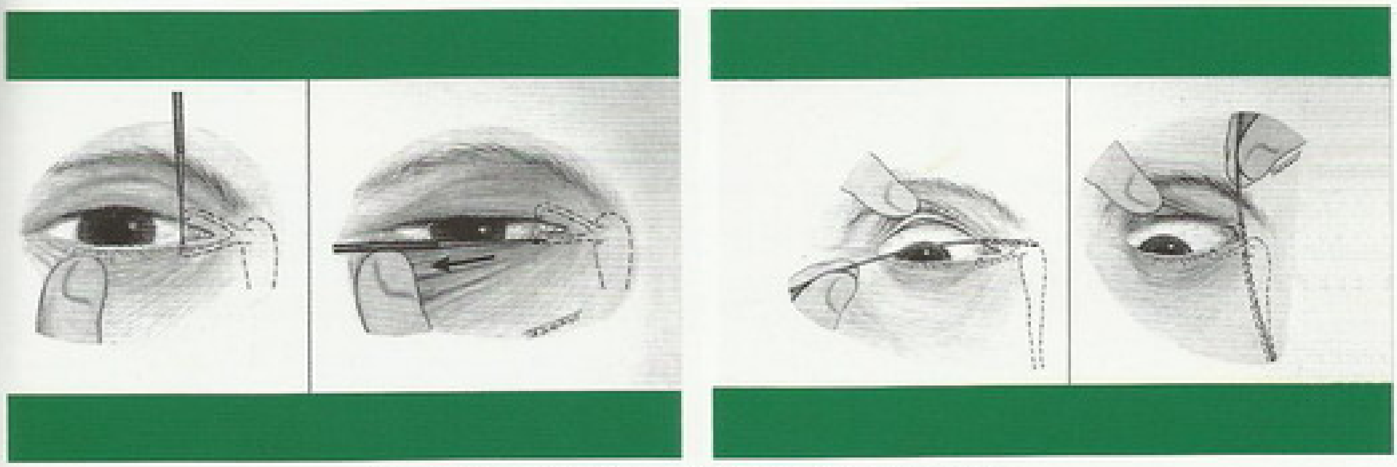
Expressed sulpher granules from the punctum



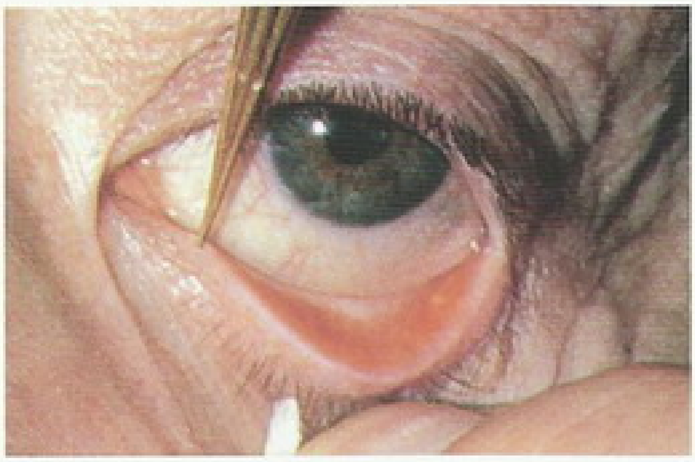
+ ve regurge test



canaliculitis (note the cheasy material)

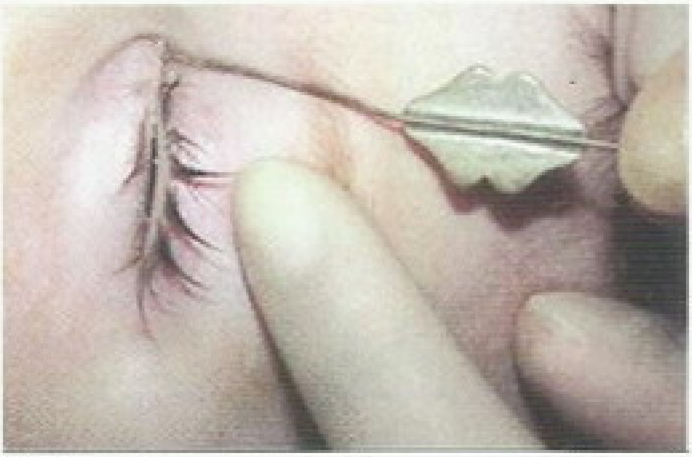


Technique of probing of the lacrimal passages

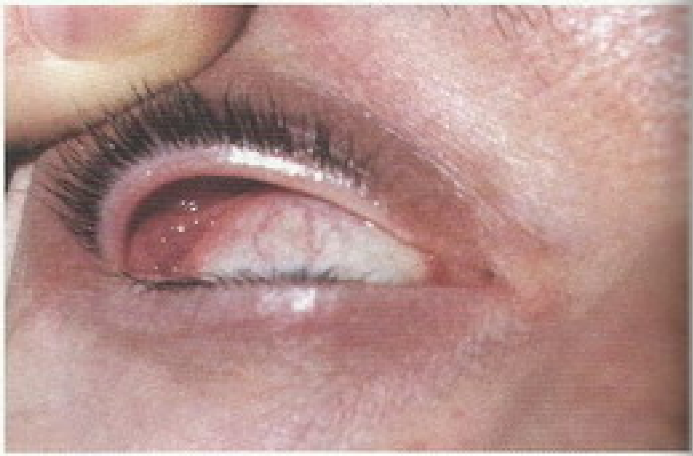


Probing of the NLD

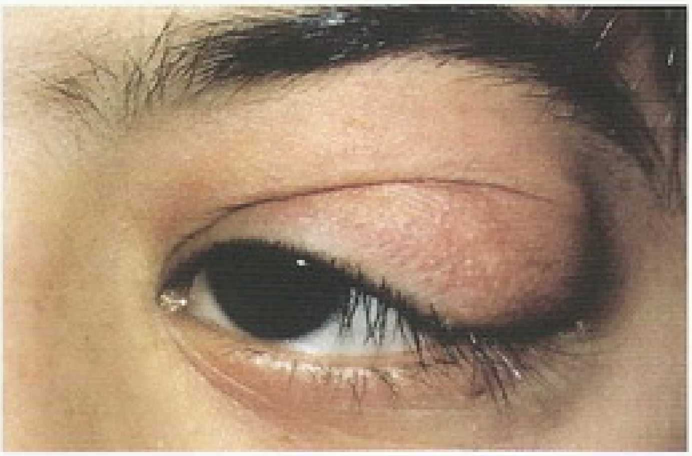
Probing of the NLD (under general anesthesia)



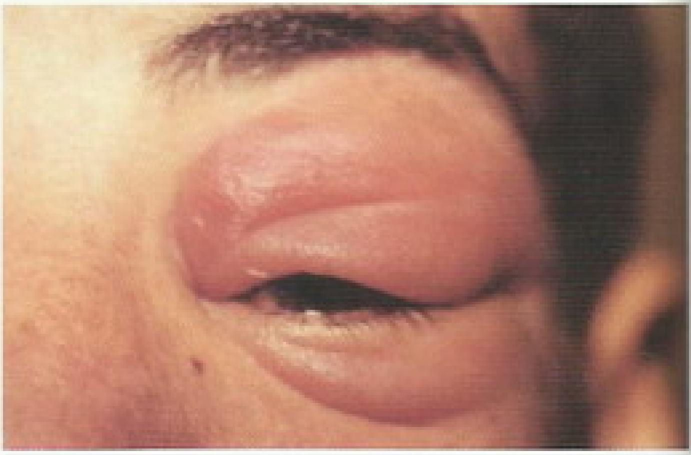
Probing of the NLD (under general anesthesia)



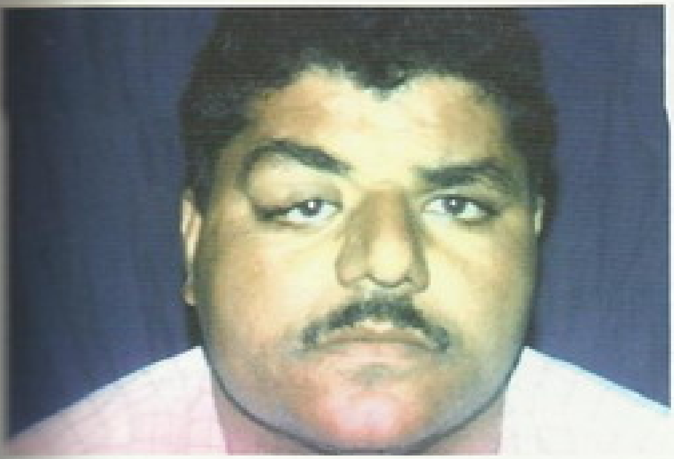
Acute dacryoadenitis



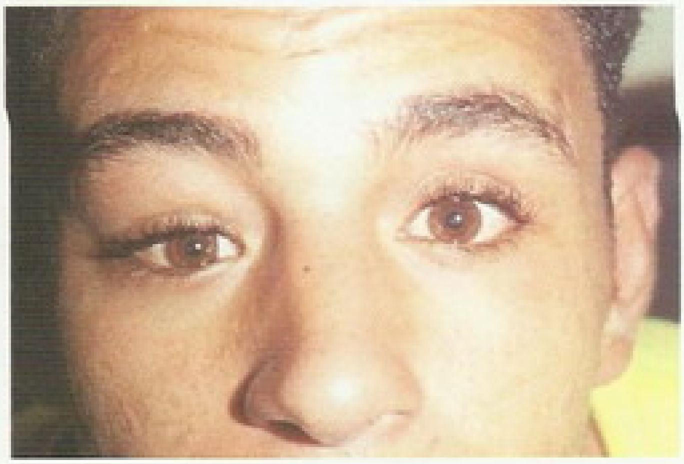
Mechanical ptosis & S-shaped deformity of the upper lid margin due to lacrimal gland mass



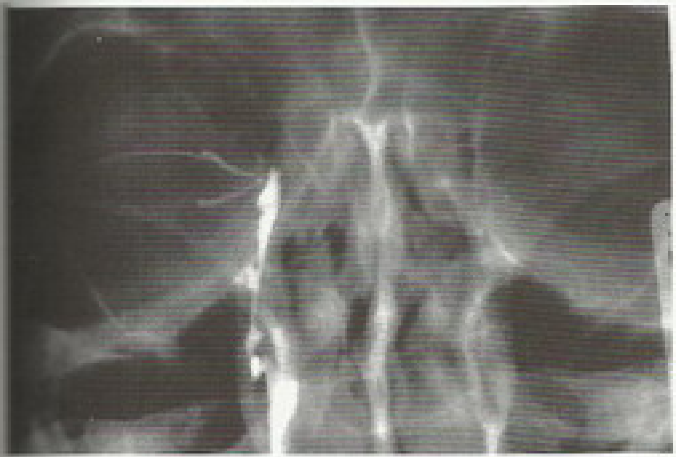
Acute dacryoadenitis with S-shaped deformity of the upper lid



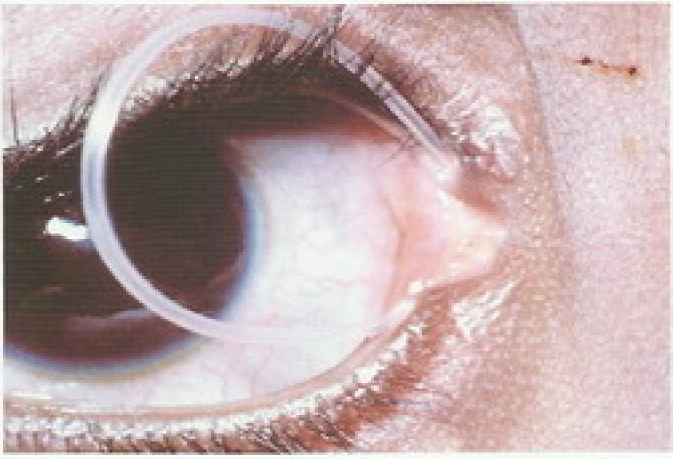
Lacrimal gland epithelial tumour
(globe displaced down & in)



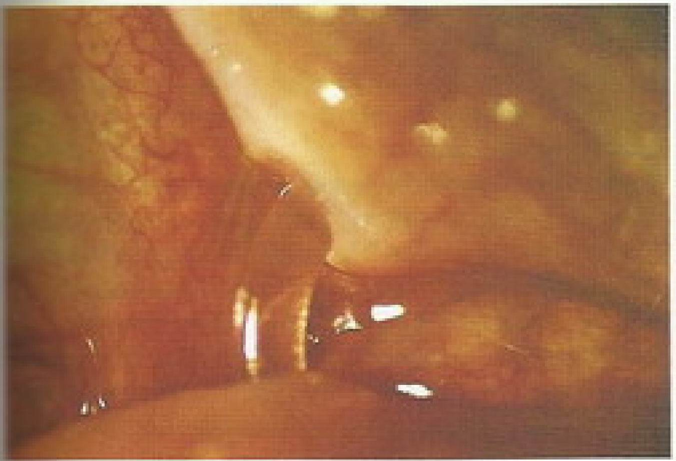
Lacrimal gland epthelial tumour
(globe displaced down & in)



Right dacryocystography



Intubation of the lacrimal system



Silicon tube
(lacrimal intubation)

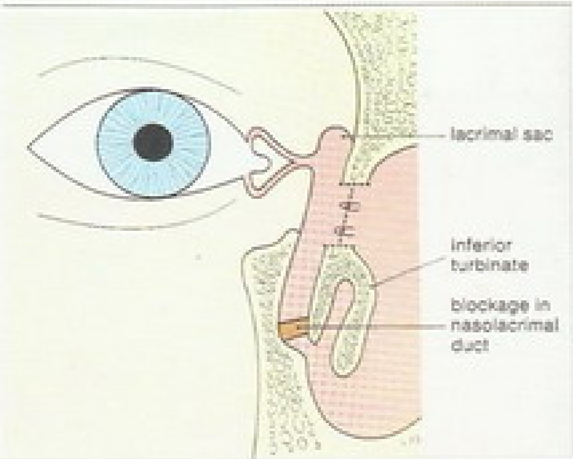
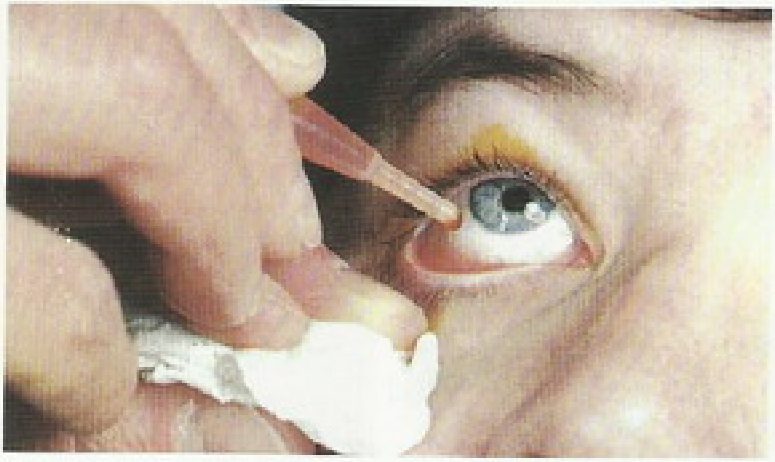
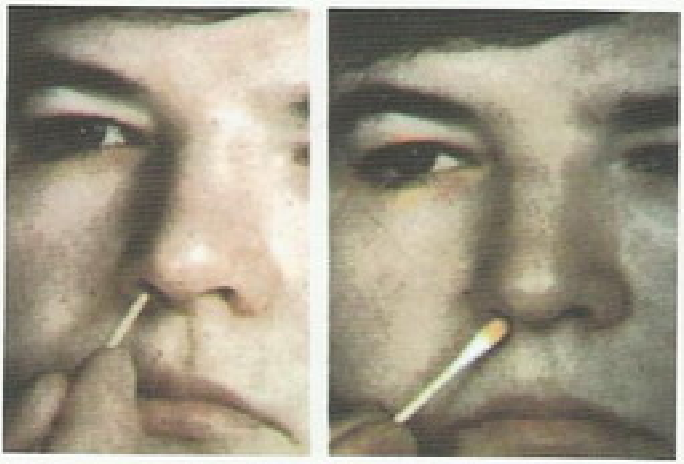

lacrimal sac
inferior turbinate
blockage in nasolacrimal duct

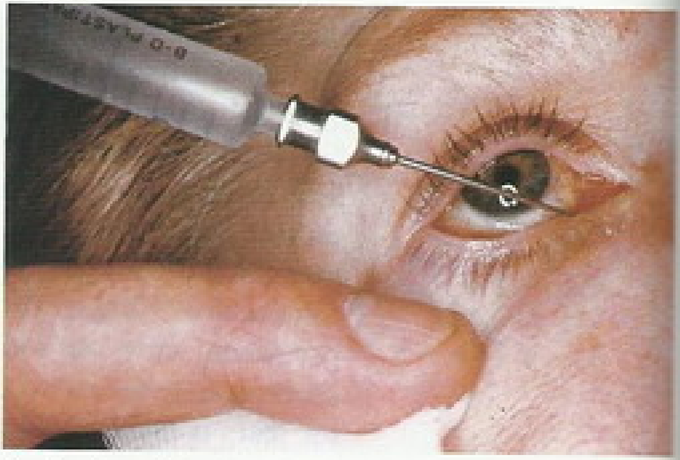
Diagram of DRC operation



Istill fluorescein in the conjunctival sac (Fl. diappearance test)



Fluorescein test

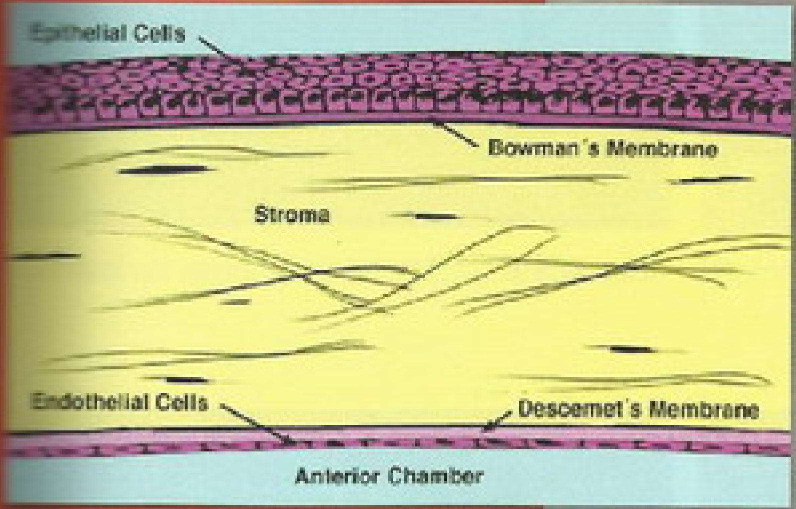


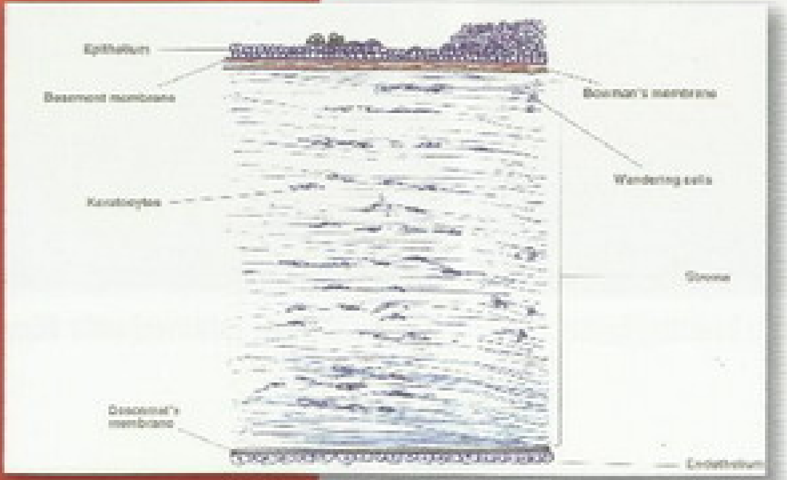
Syringing of the lacrimal system

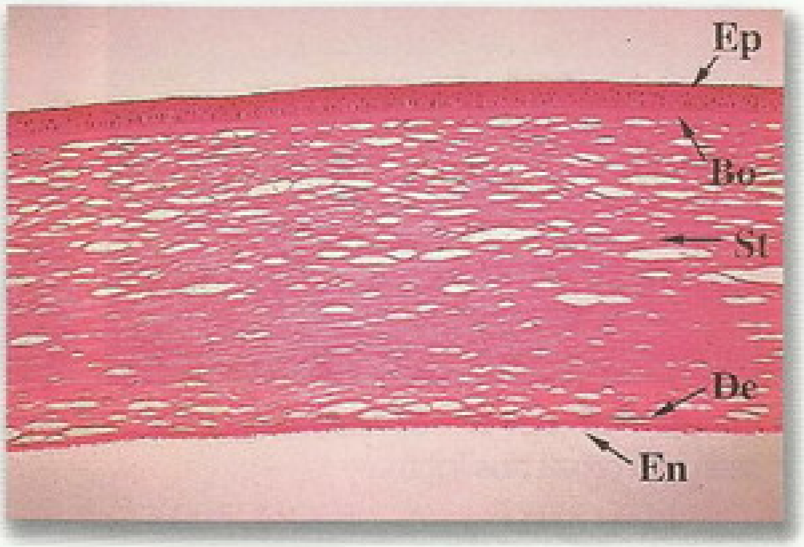
Jones dye test

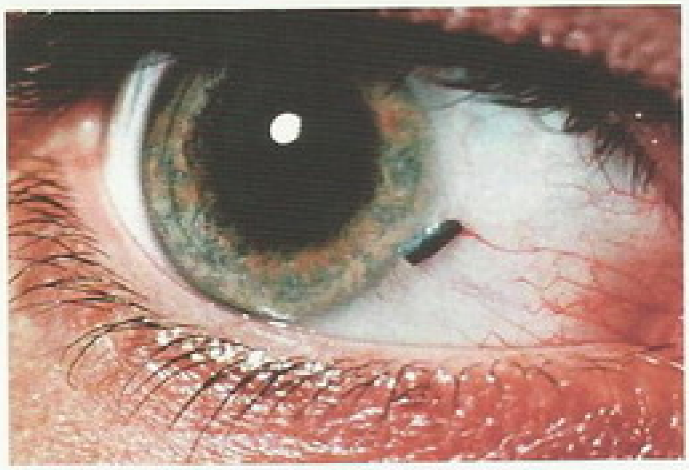
Chapter 4

Disorders of The Cornea

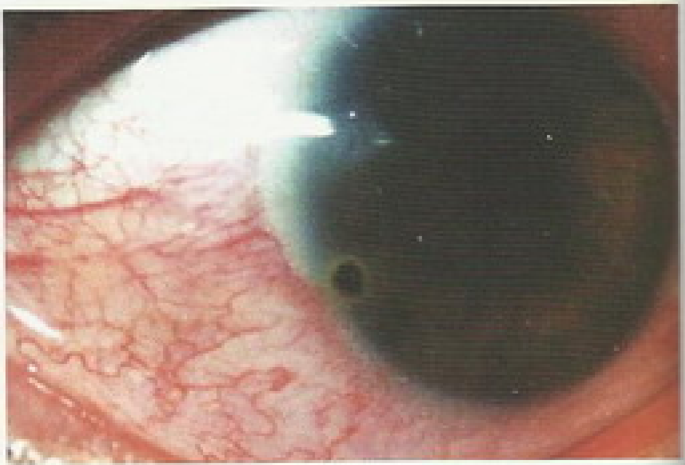

Epithelial Cells
Bowman's Membrane
Stroma
Endothelial Cells
Descemet's Membrane
Anterior Chamber


Epithelium
Basement membrane
Bowman's membrane
Wandering cells
Keratocytes
Stroma
Descemet's membrane
Endothelium

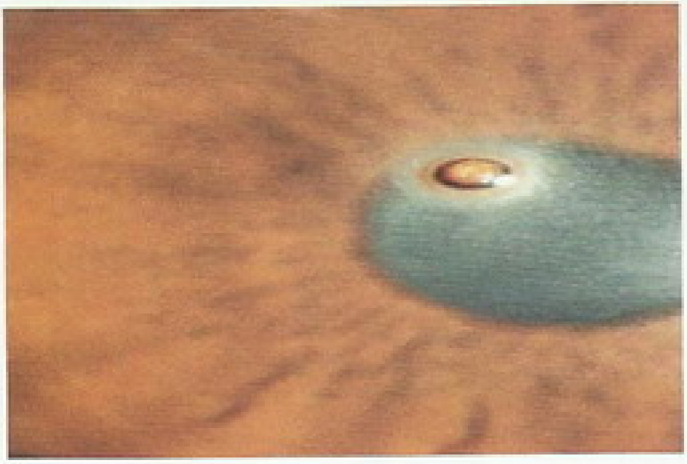

Ep
Bo
St
De
En



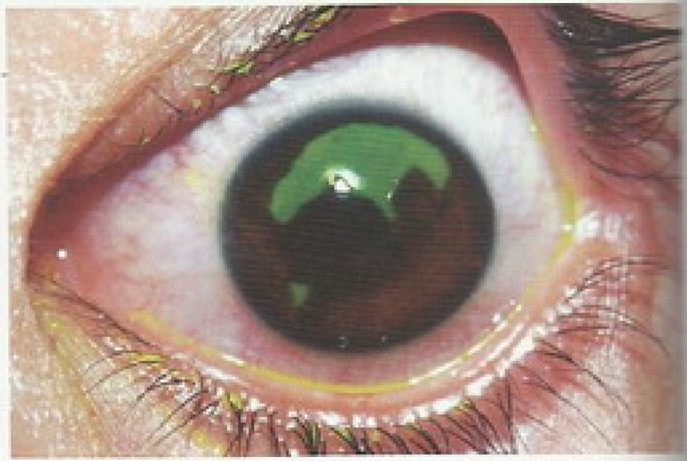
Limbal F.B



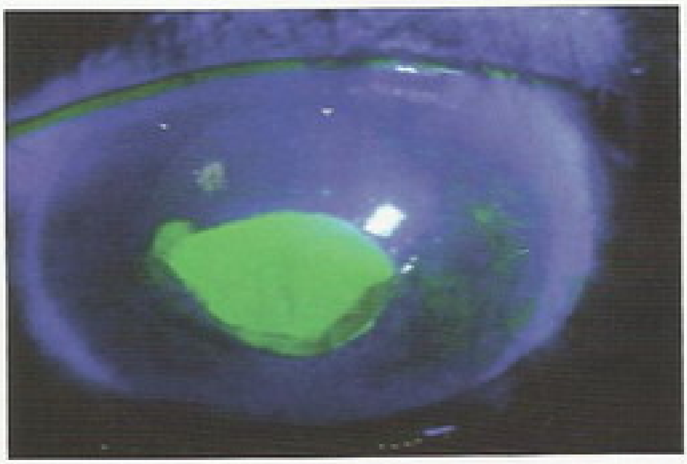
Corneal F.B



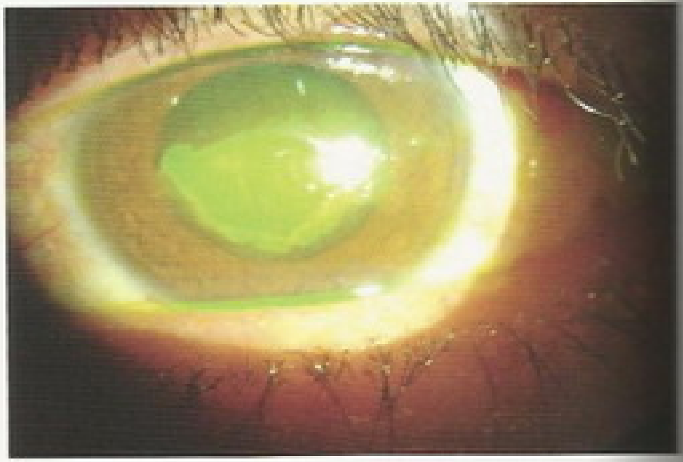
Corneal F.B



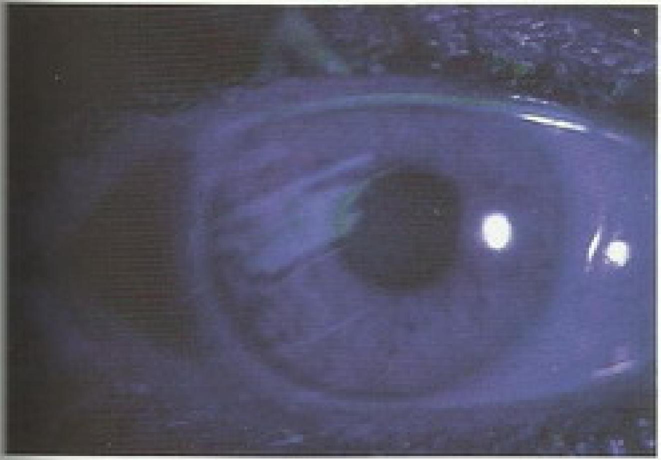
Corneal ulcer (stained with fluorescein)



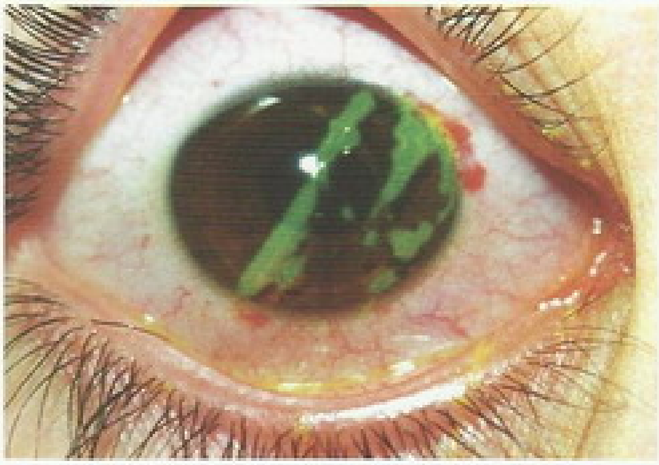
Corneal ulcer (stained with fluorescein better seen with cobalt blue light)



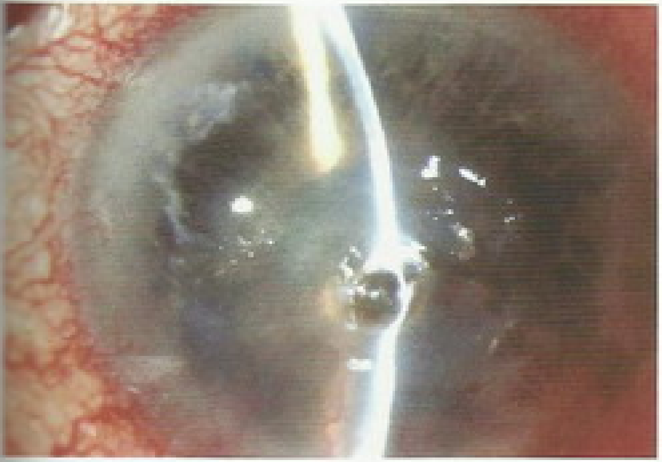
Corneal ulcer (stained with fluorescein)



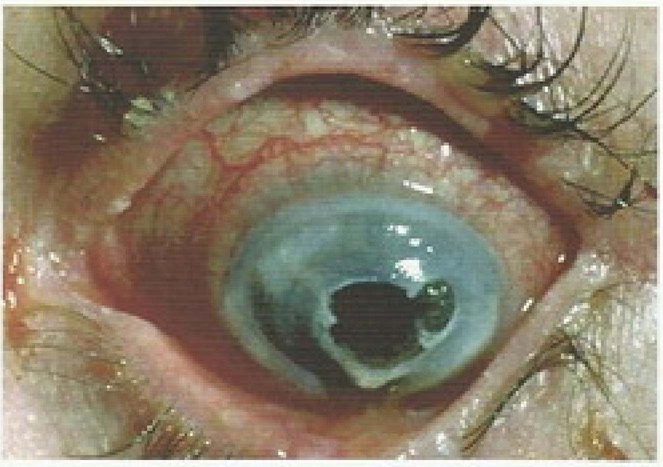
Corneal abrasions (stained with fluorescein)



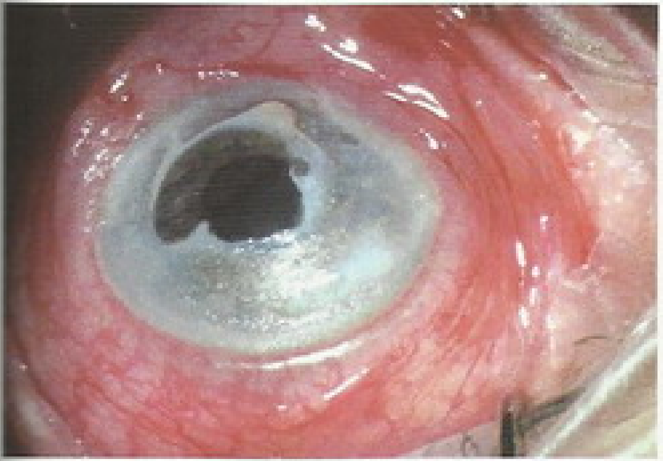
Corneal abrasions (stained with fluorescein)



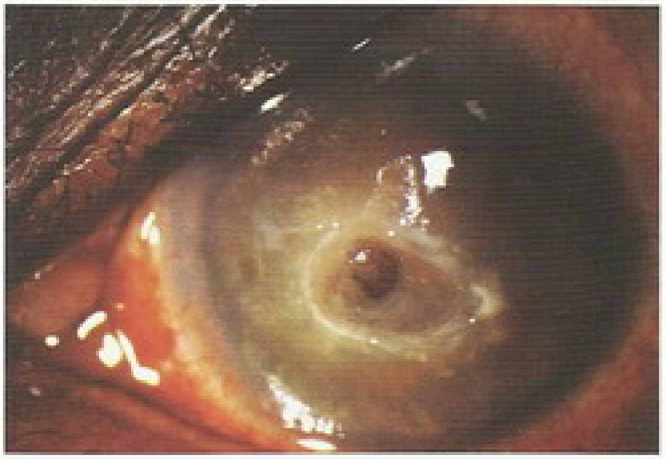
Descematocele (slit view)



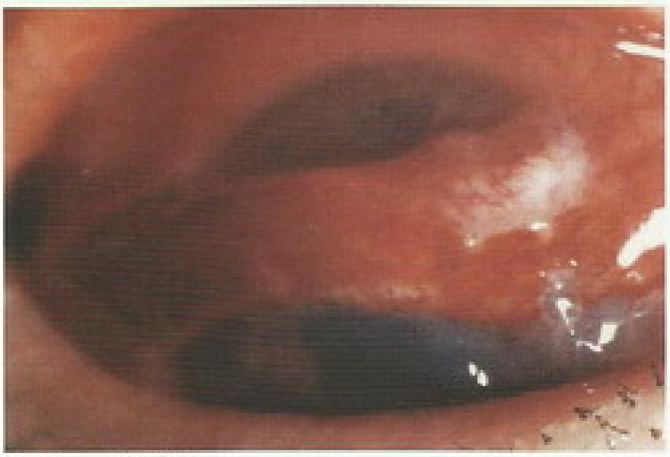
Perforated corneal ulcer



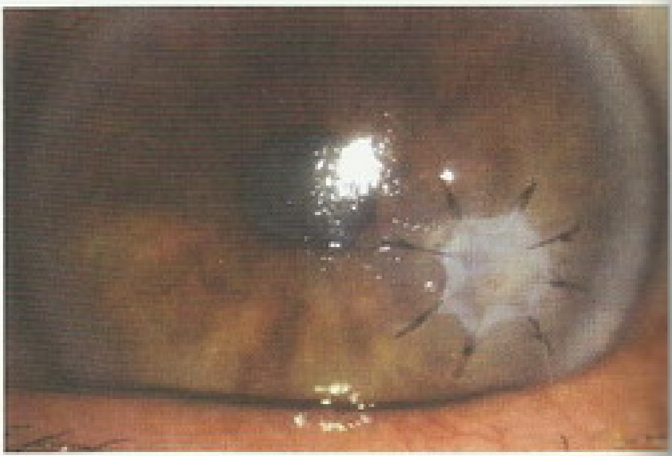
Perforated corneal ulcer



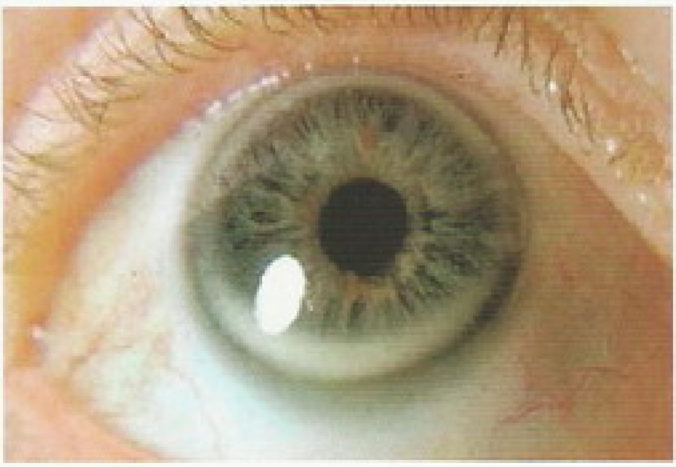
Corneal perforation



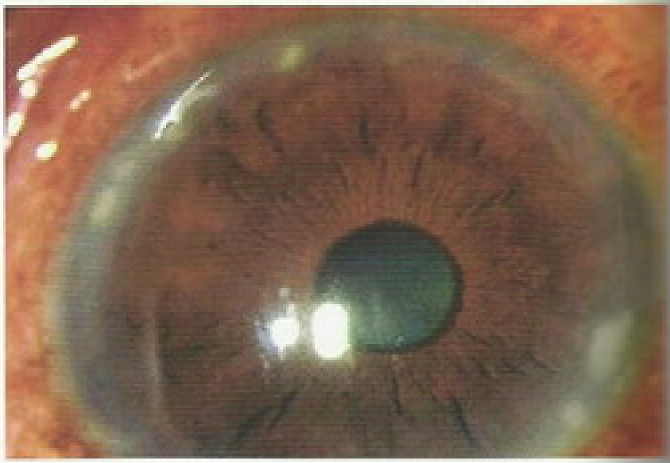
Conjunctival flap



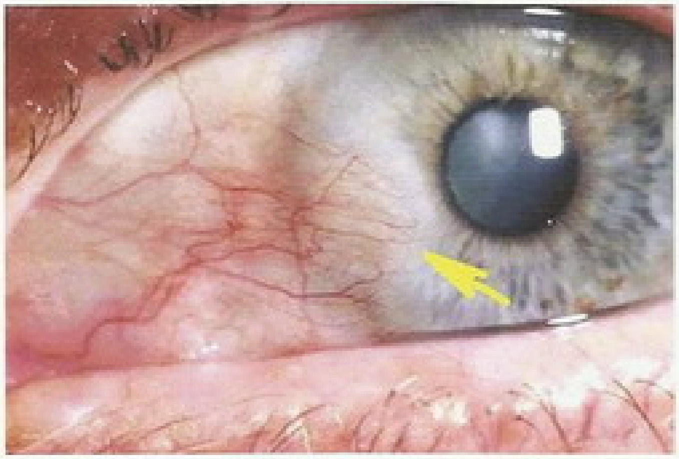
AMG (amniotic membrane graft)



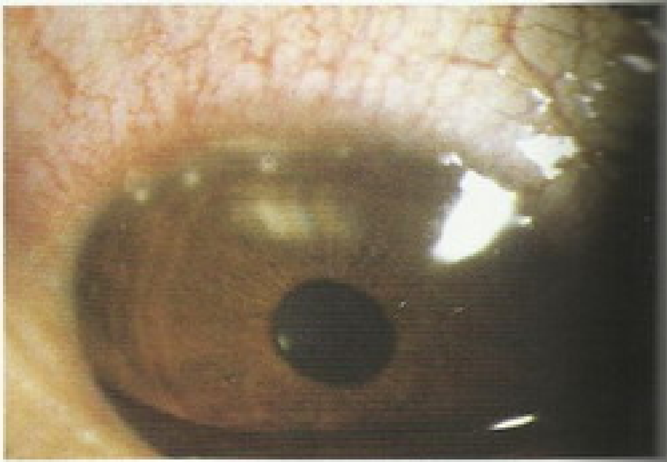
Arcus senilis



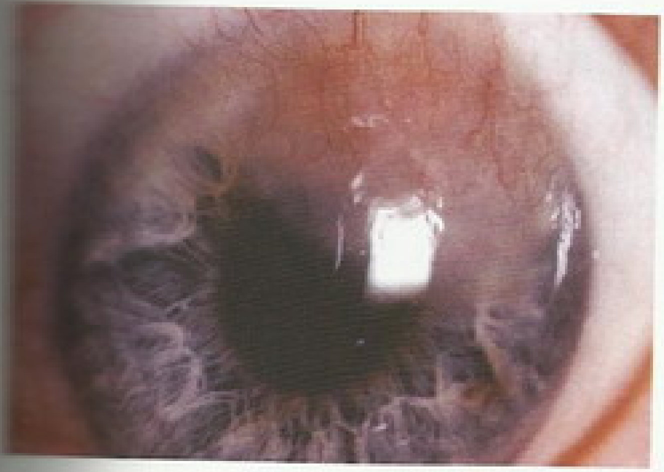
Annular pannus



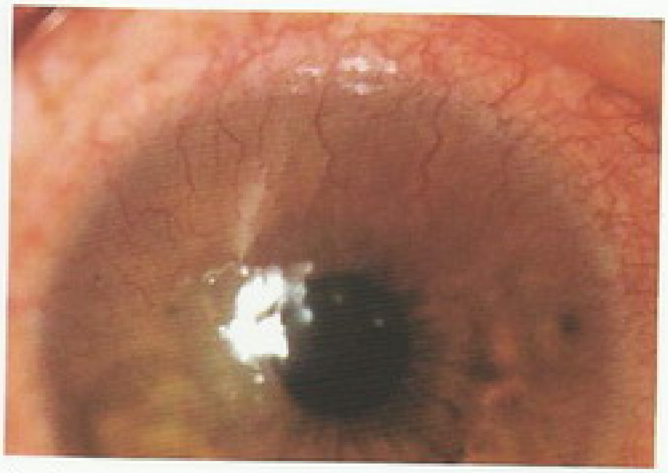
Corneal pannus



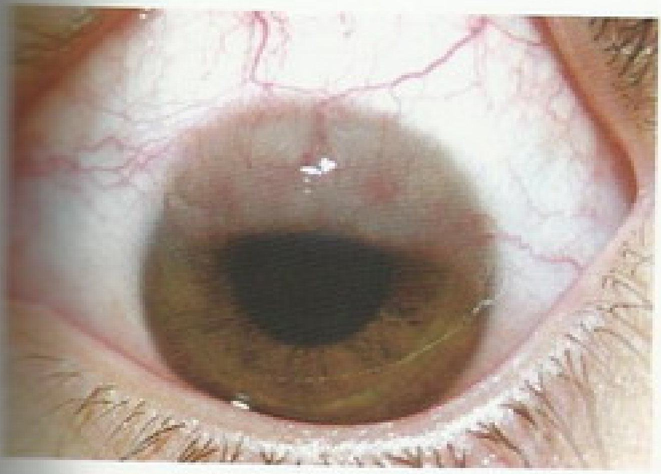
Herbet's follicles & Rosettes



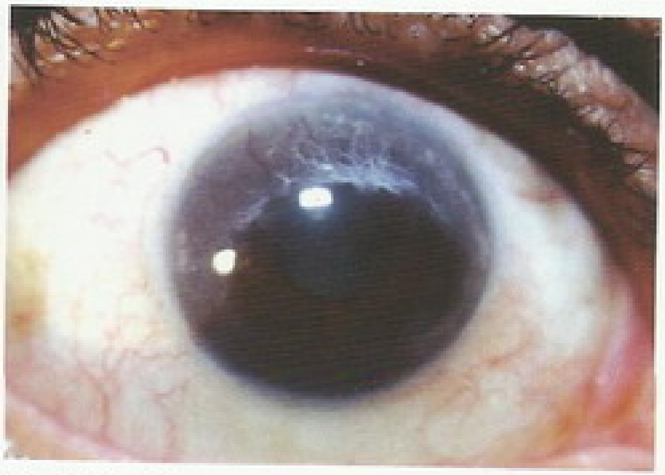
Active trachomatous pannus



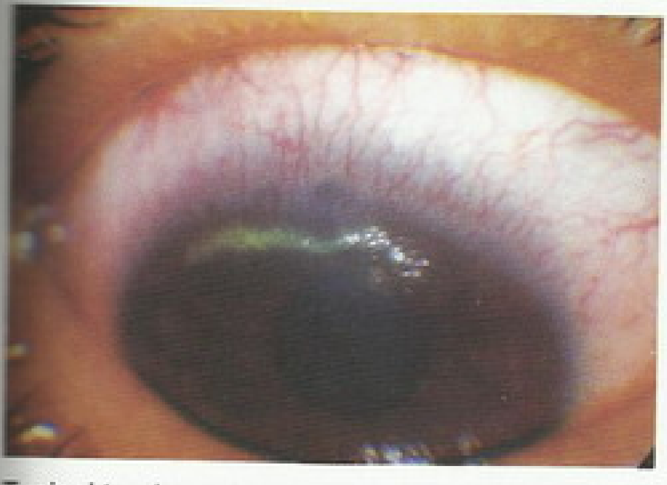
Active trachomatous pannus



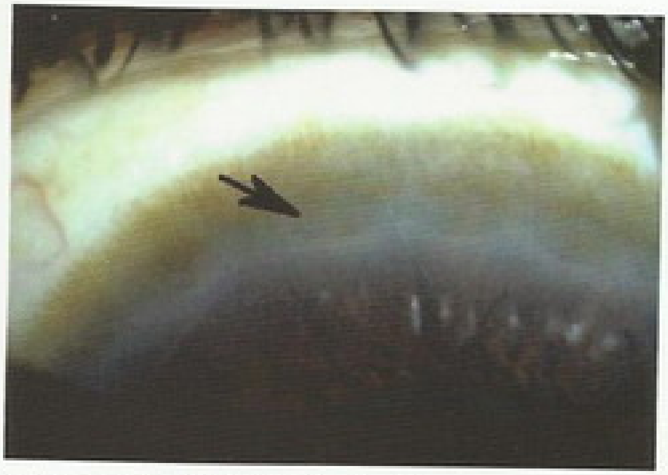
Active trachomatous pannus



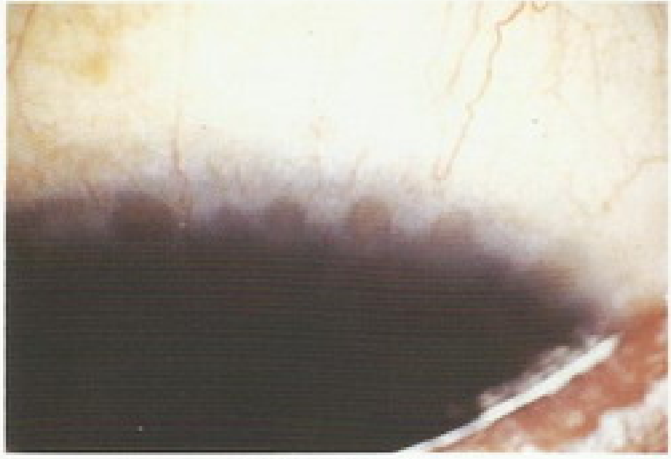
Healed trachomatous pannus



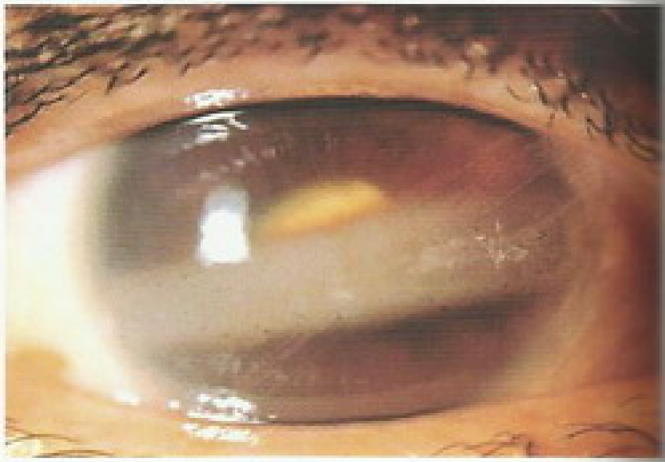
Typical trachomatous ulcer



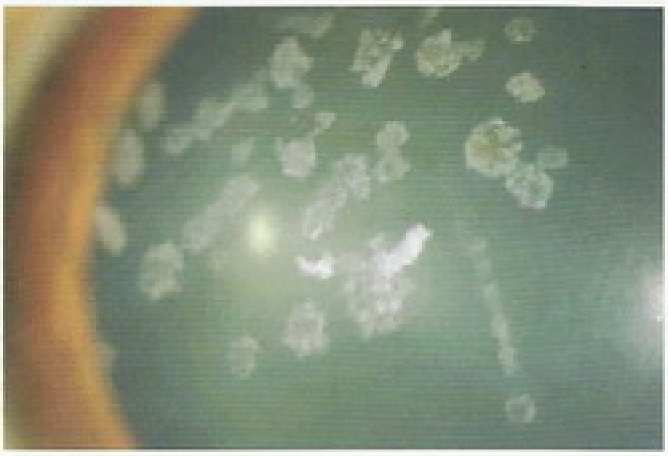
Pannus sicccus & Herbet's pits



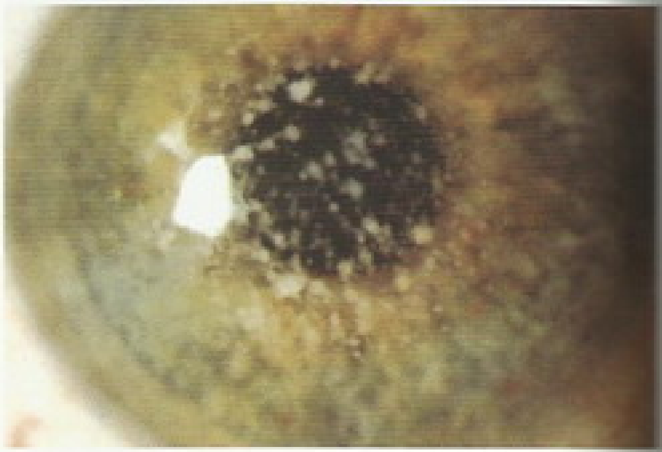
Pannus sicccus & Herbet's pits



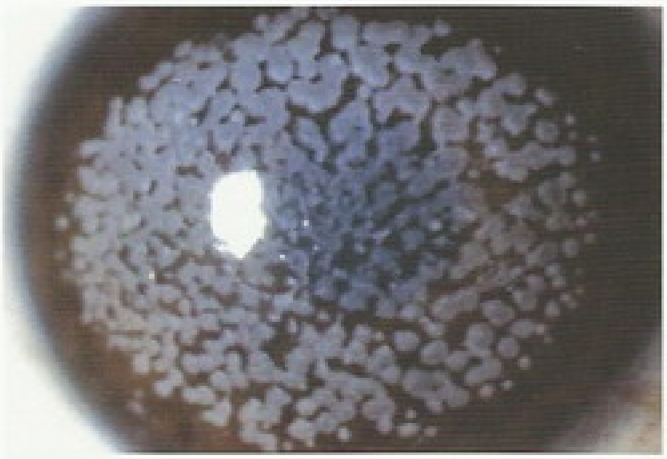
Band shaped keratopathy



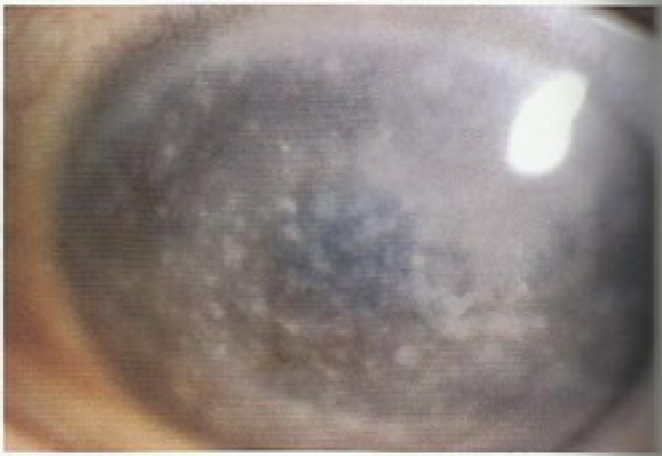
Granular (nodular) dystrophy



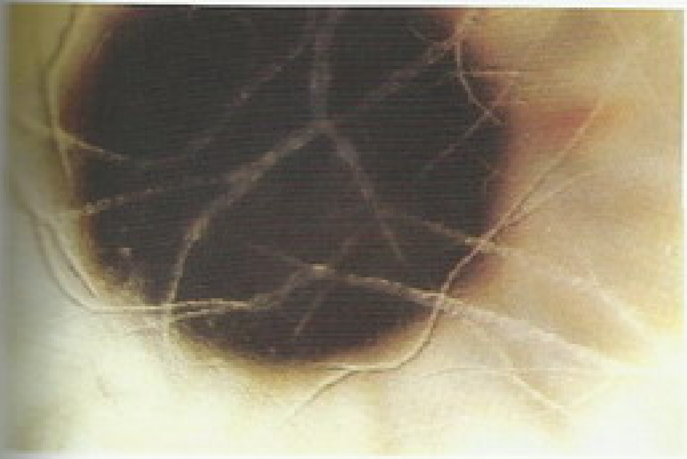
Granular (nodular) dystrophy



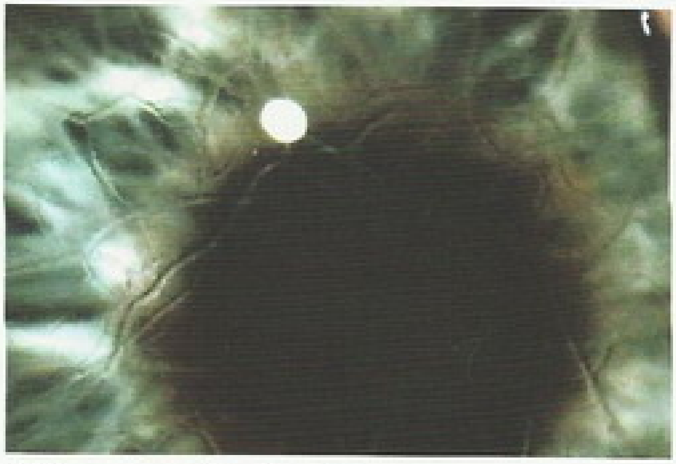
Severe granular (nodular) dystrophy



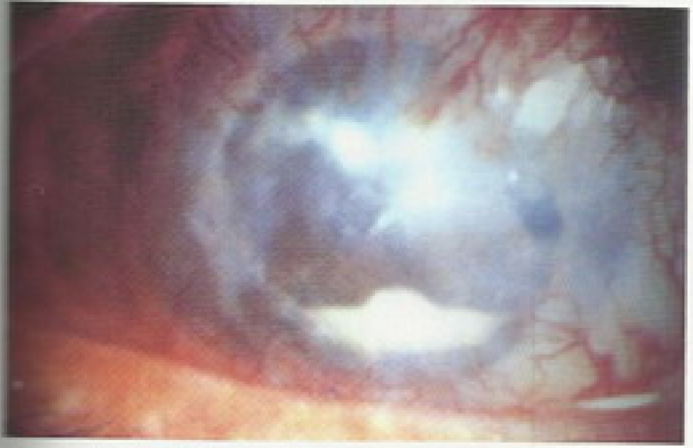
Macular dystrophy



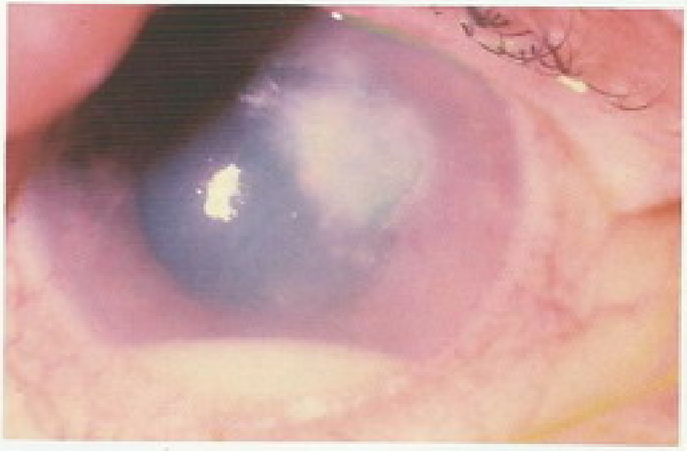
Lattice corneal dystrophy



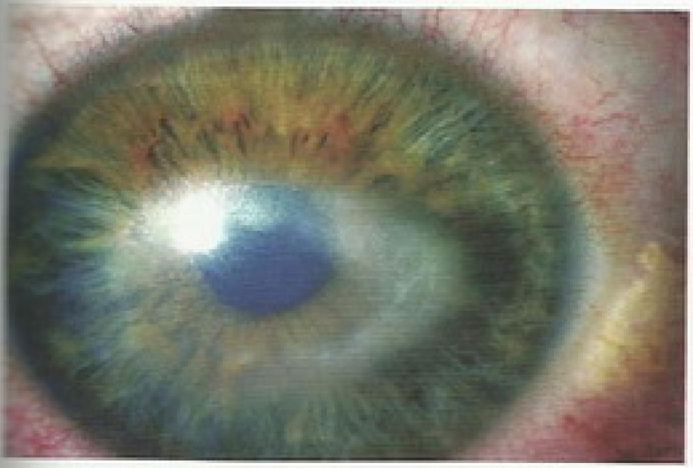
Lattice corneal dystrophy



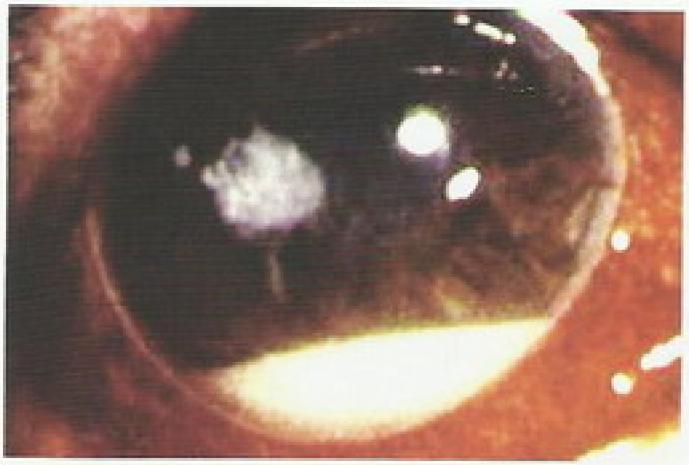
Fungal keratitis



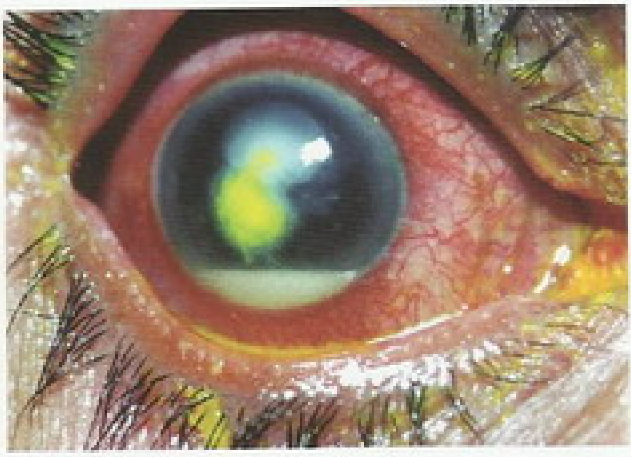
Fungal keratitis



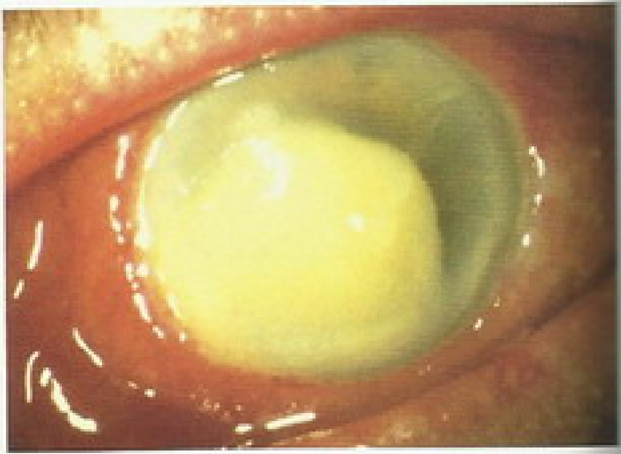
Acanthamoebic keratitis (note ring infiltration)



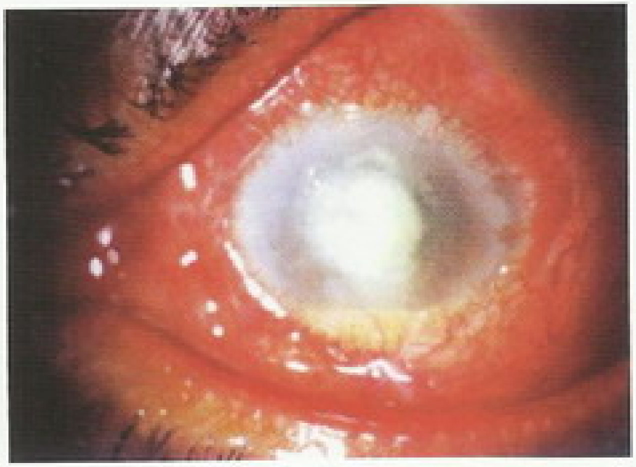
Hypopyon ulcer



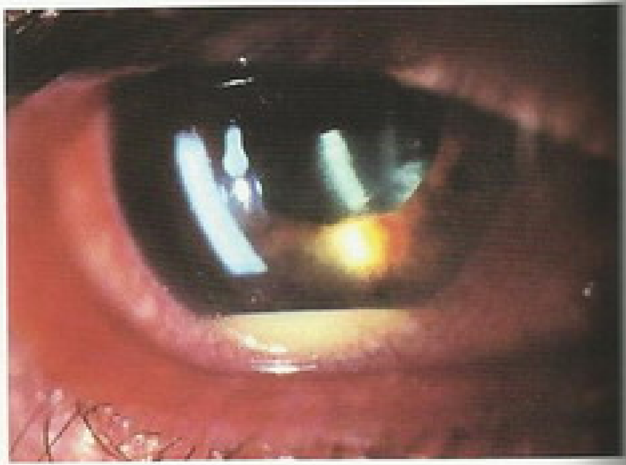
Hypopyon ulcer



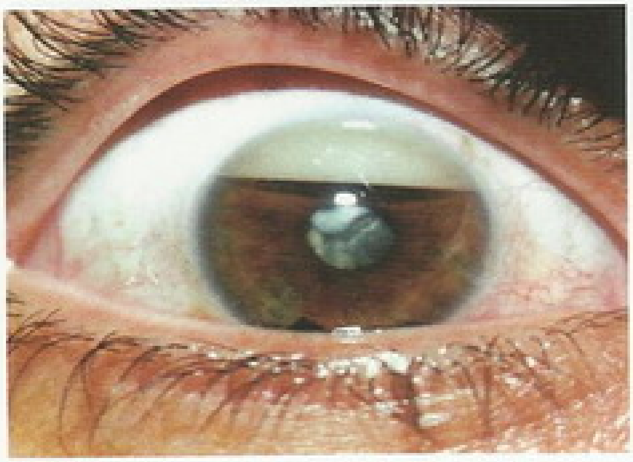
Anterior dislocation of a cataractous lens.



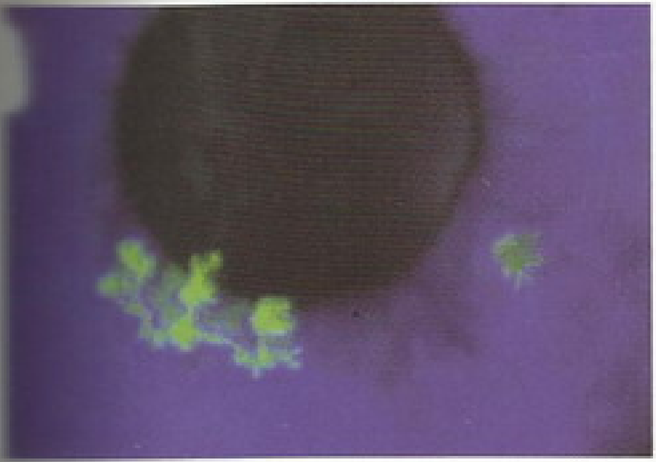
Corneal abscess



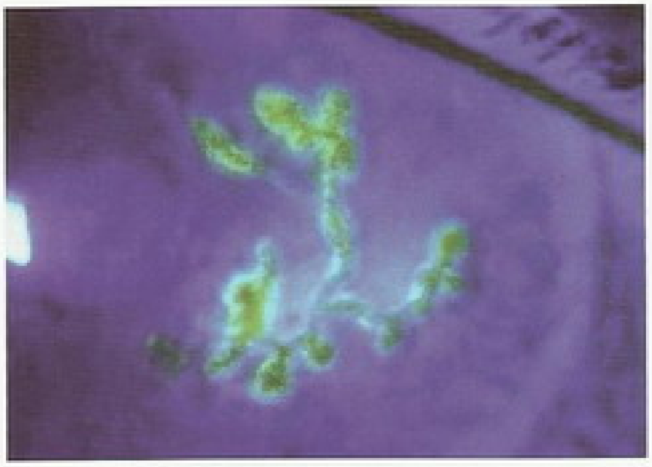
Hypopyon + ciliary injection



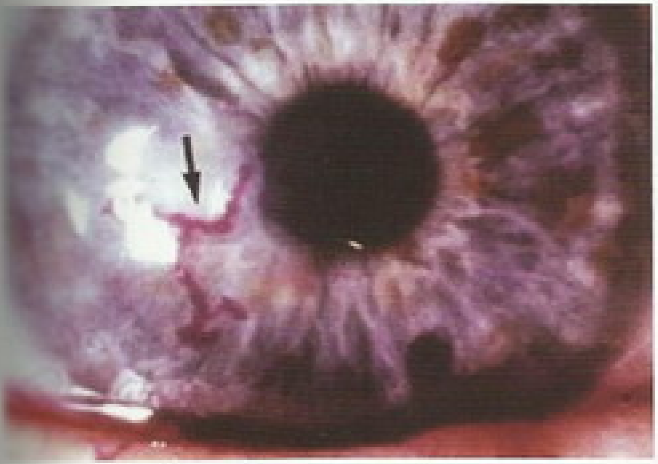
Inverted hypopyon (emulsifies silicon oil)
+ cataract



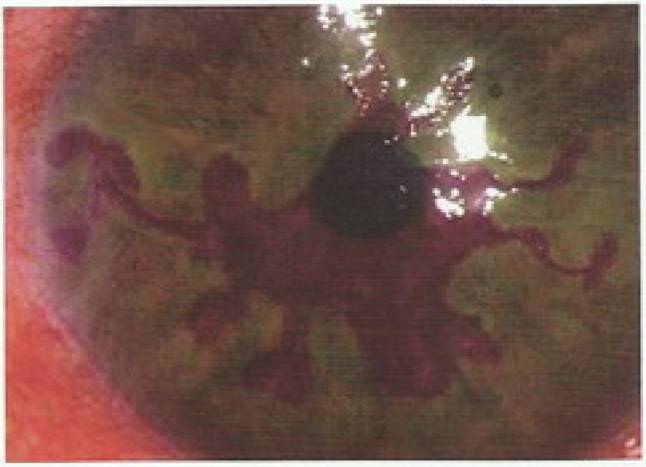
Dendretic ulcer (stained with fluorescein)



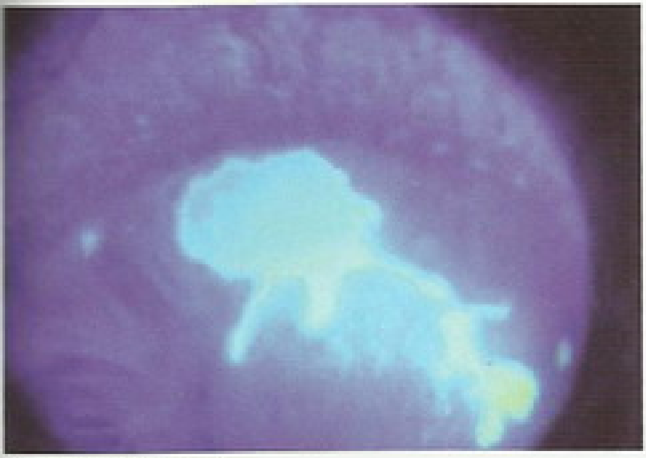
Dendretic ulcer (stained with fluorescein)



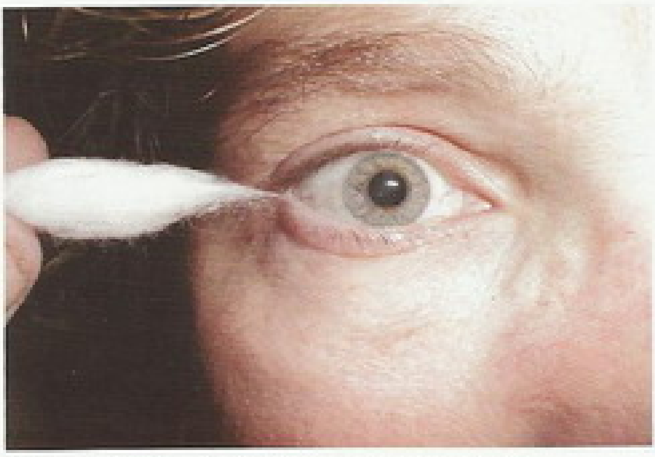
Dendretic ulcer (stained with rose Bengal)



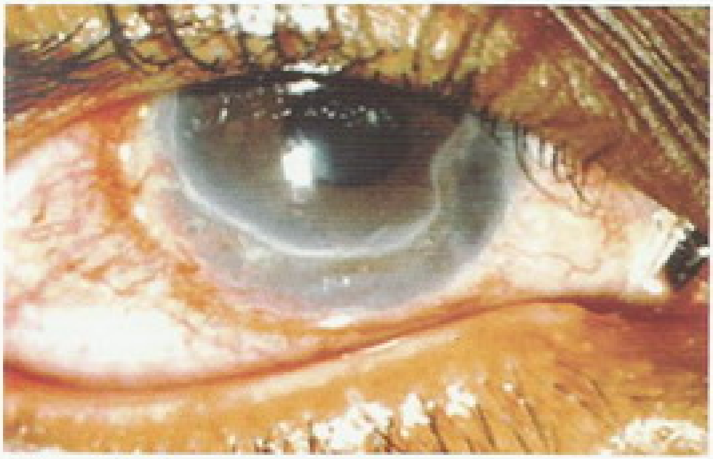
Geographic ulcer (stained with rose Bengal)



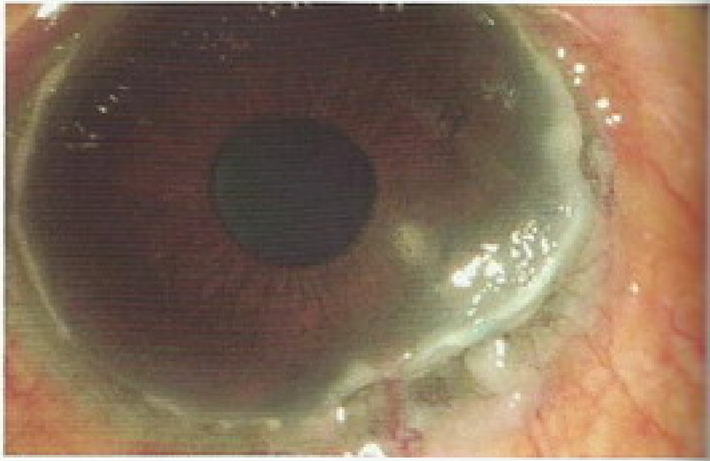
Geographic ulcer



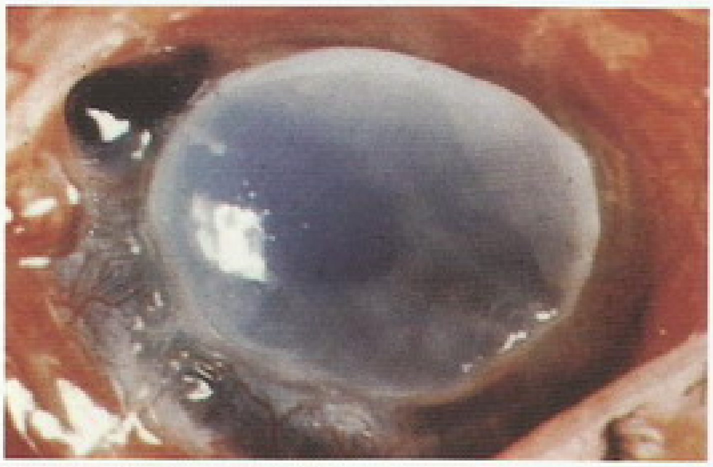
Corneal reflex to test corneal sensation



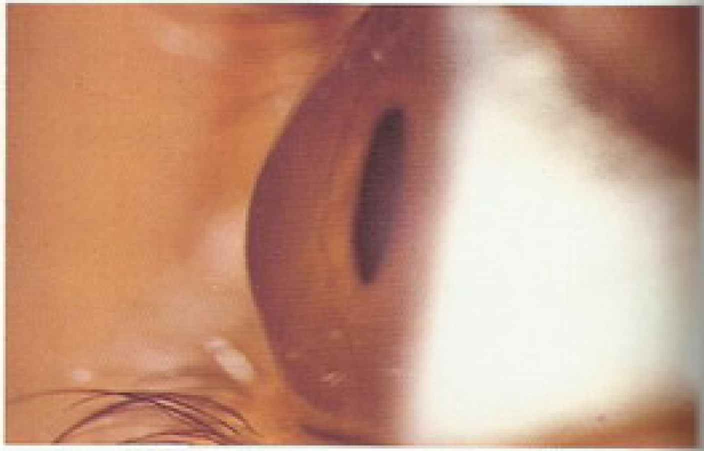
Mooren's ulcer



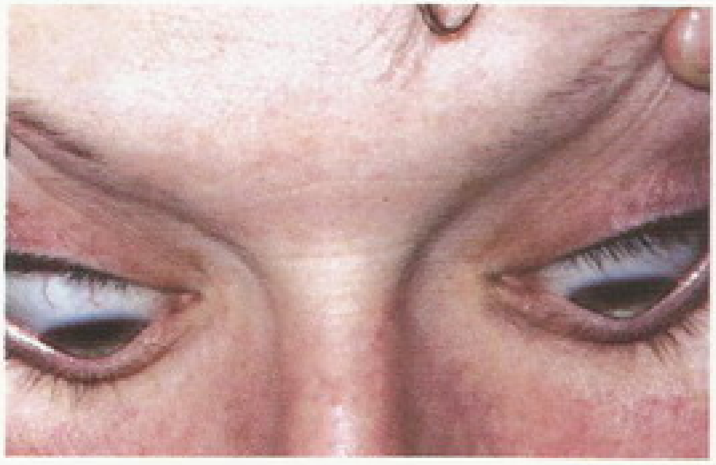
Mooren's ulcer



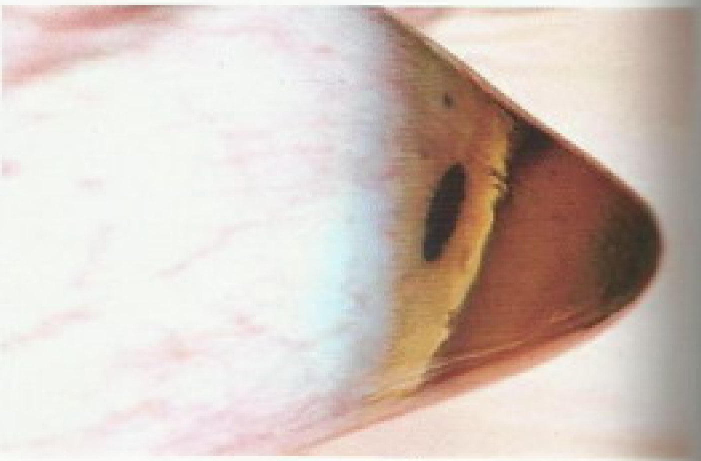
Mooren's ulcer with iris prolapse



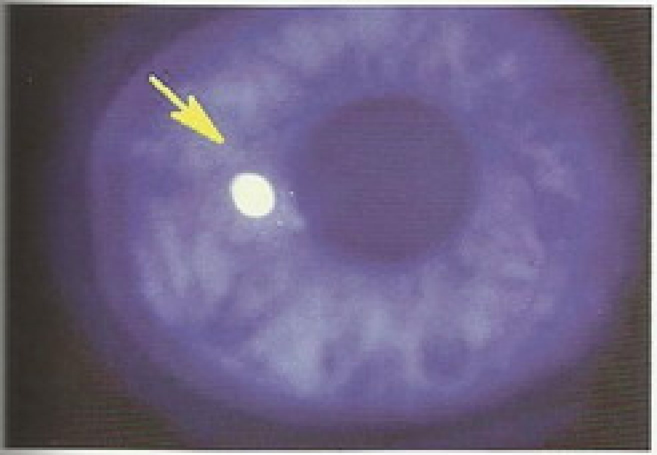
Keratoconus (profile view)



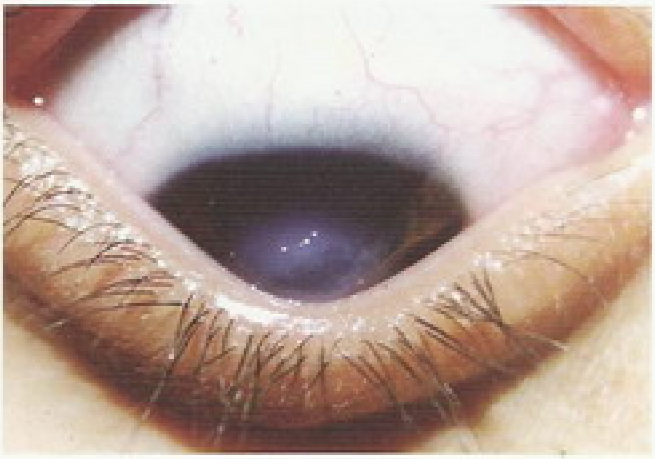
Keratoconus with Munson sign



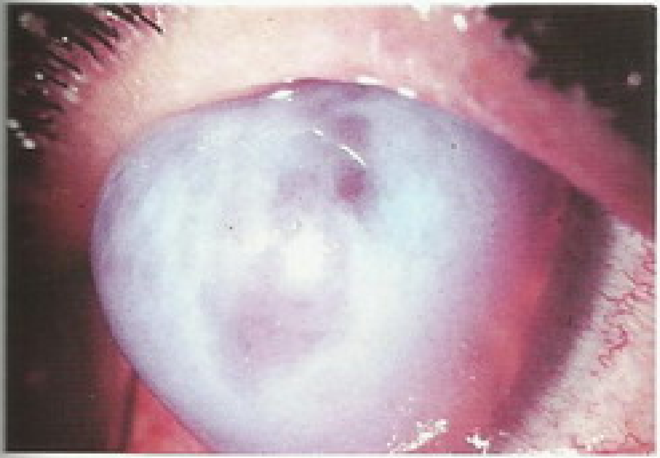
Keratoconus (profile view)



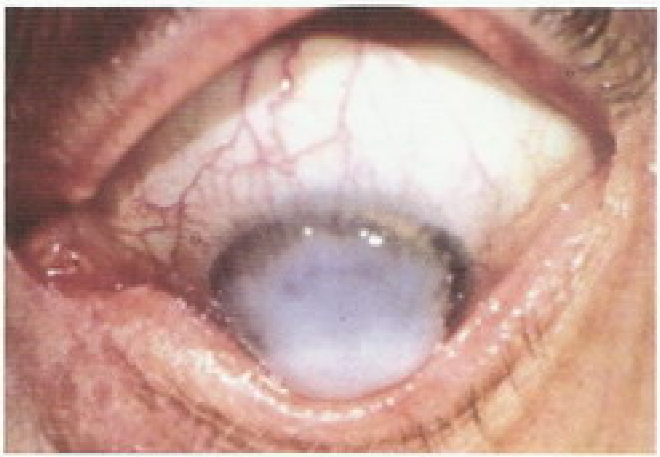
Keratoconus front view showing Flisher ring



Keratoconus showing corneal opacity at the apex with Munson's sign

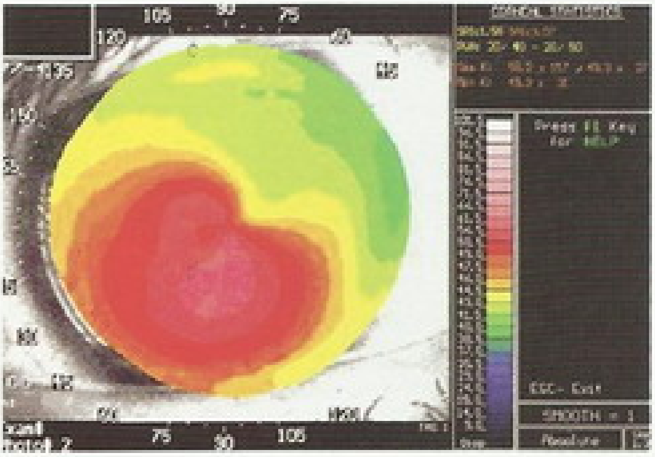


Acute hydrops

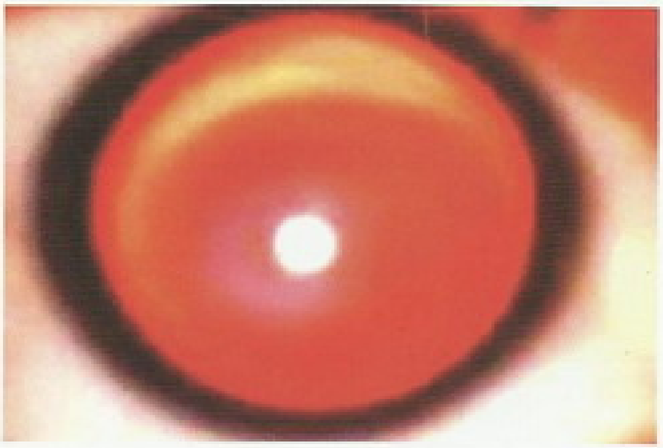


Acute hydrops

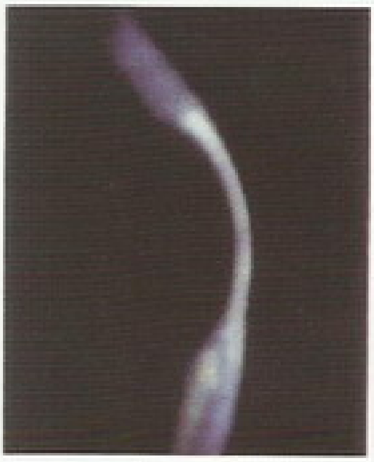
Corneal topography machine


105
90
75
120
60
150
Press F1 Key for HELP
ESC- Exit
SMOOTH = 1
75
90
105

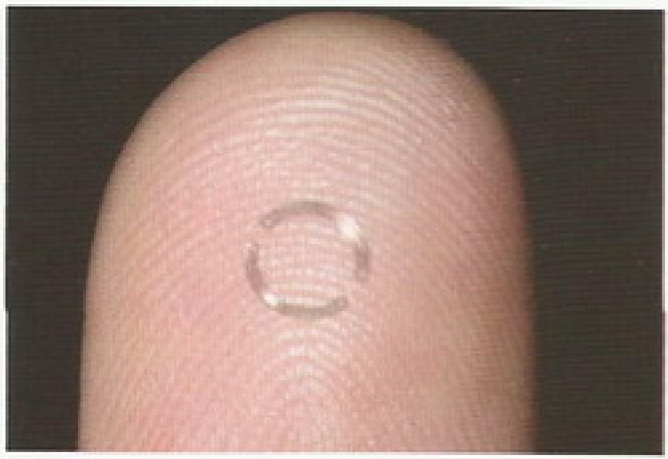
Corneal topography map of Keratoconus



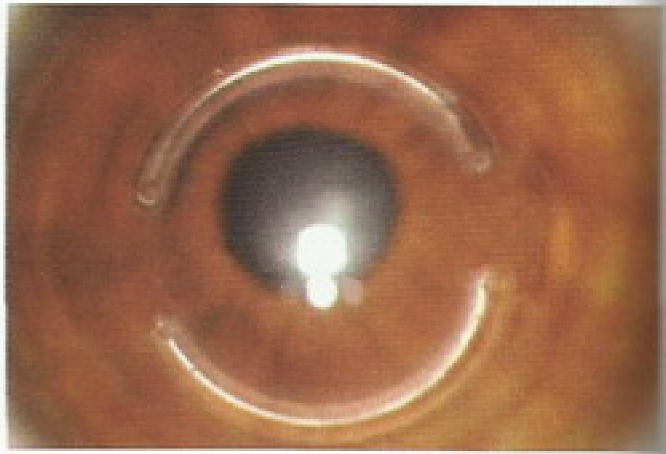
Oil droplet sign in case of keratoconus



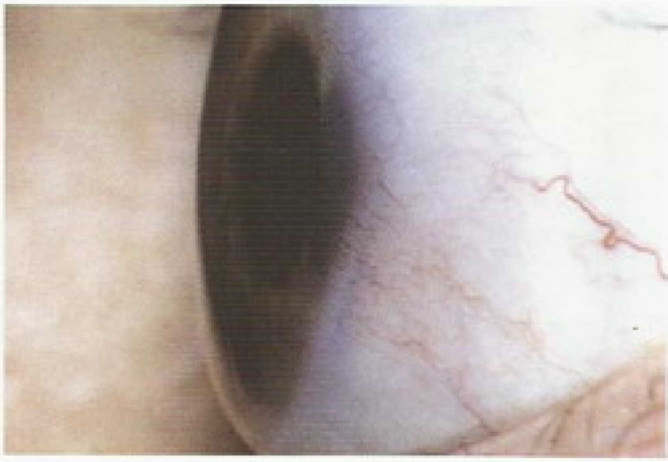
Posterior keratoconus



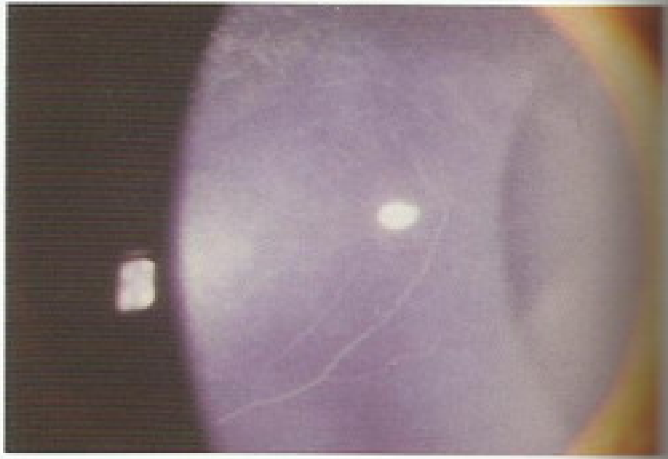
Ferrara(Keraring) intrastromal corneal rings for stabilization of progression of keratoconus



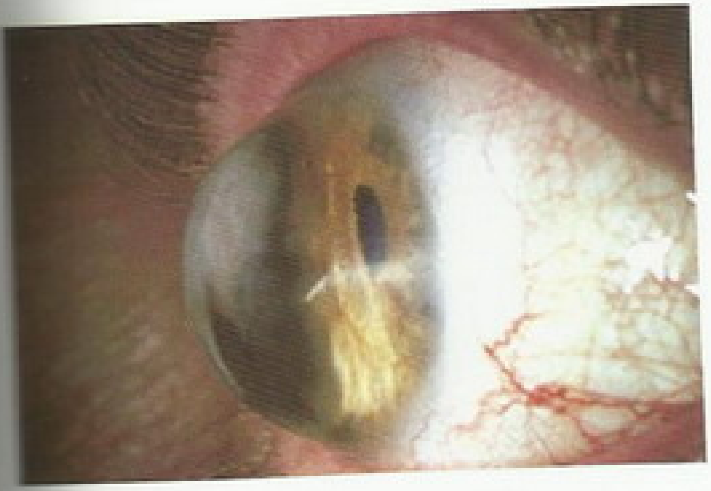
Ferrara(Keraring) intrastromal corneal rings for stabilization of progression of keratoconus



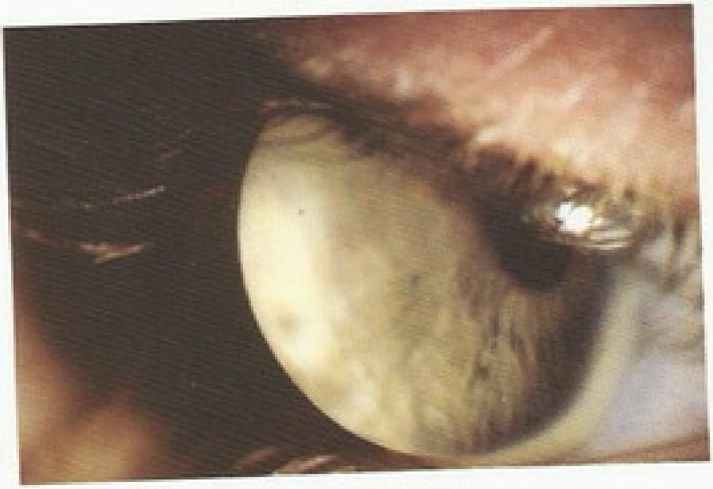
Cornea plana



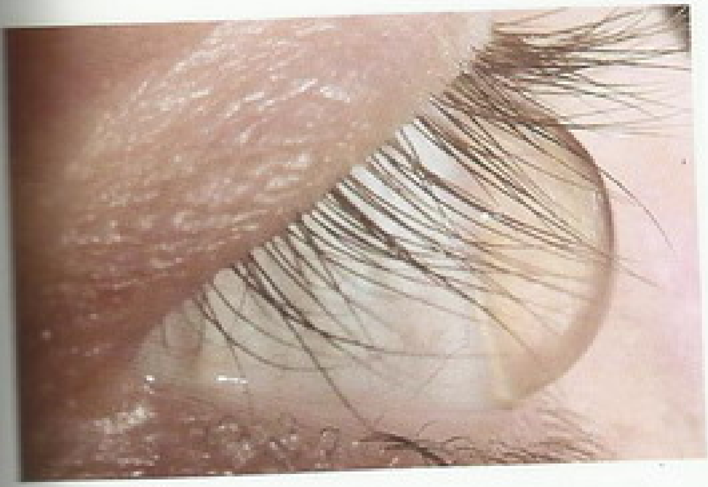
Prominent corneal nerves in case of keratoconus.



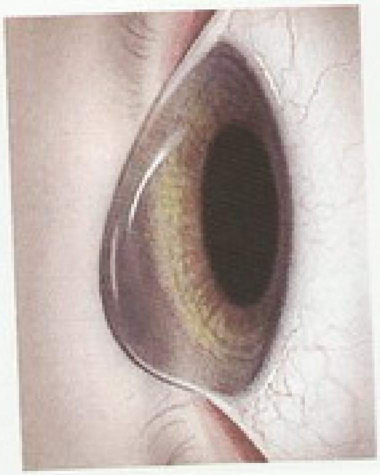
Keratoglobus



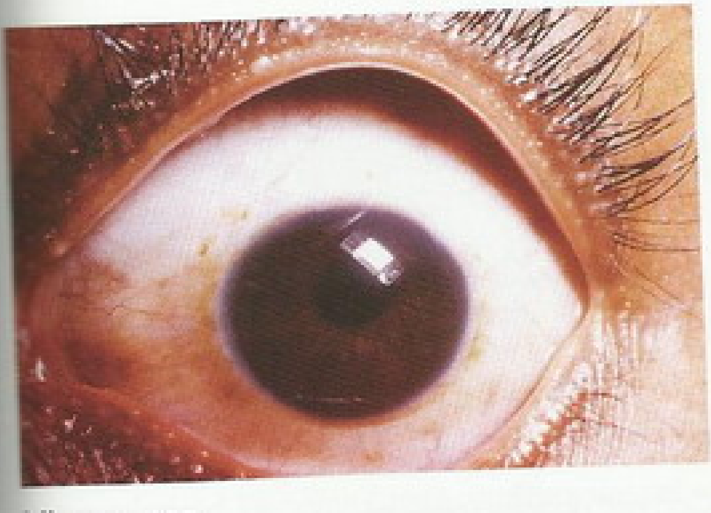
Keratoglobus



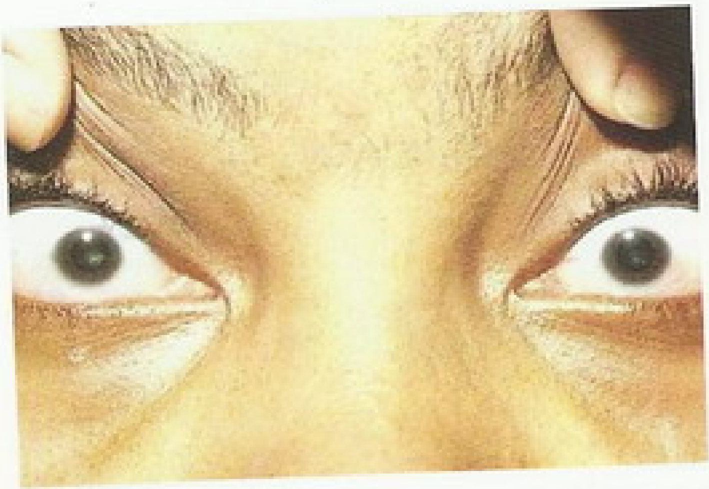
Keratoglobus



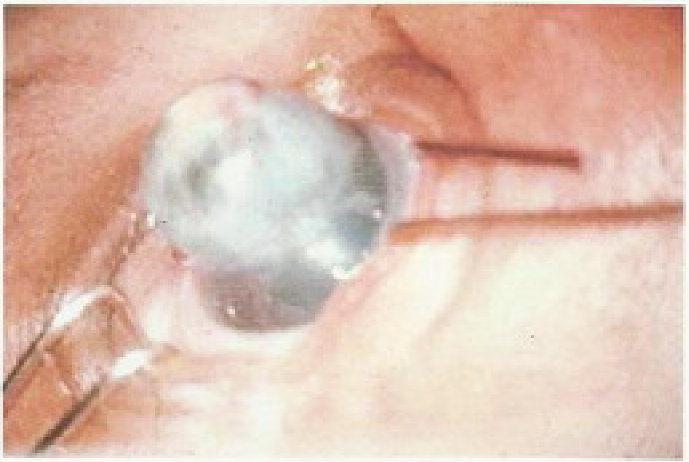
Pellucid marginal degeneration (in the lower 1/3 of the cornea)



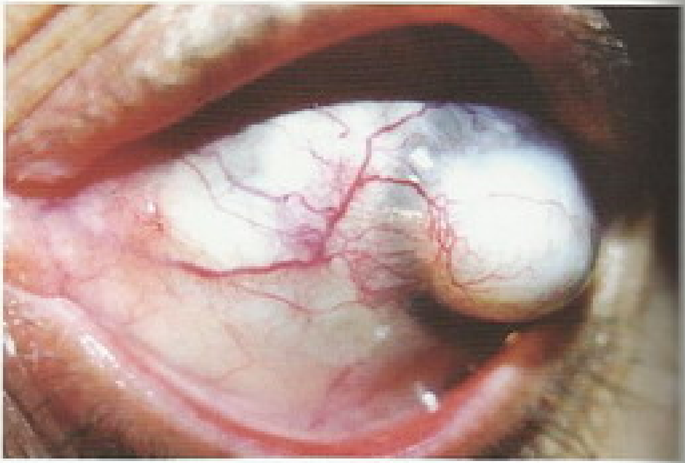
Microcornea



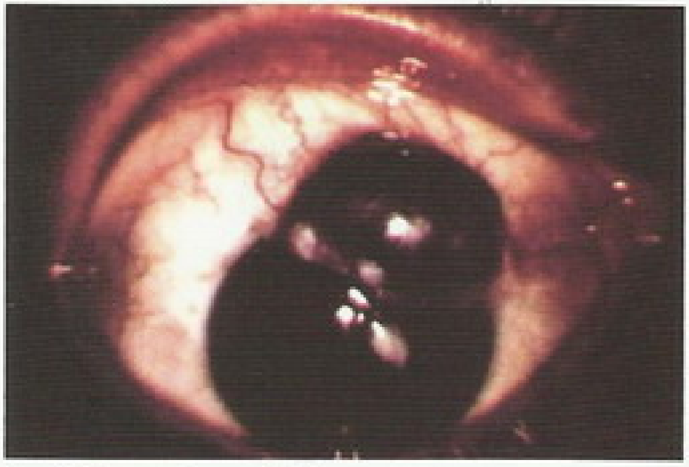
Microcornea



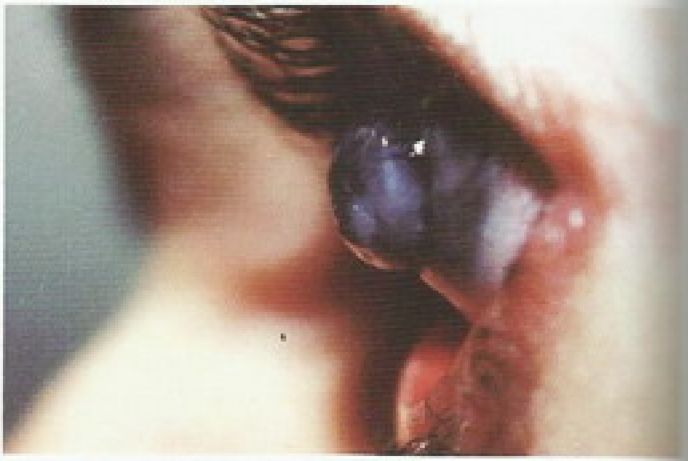
Keratectazia



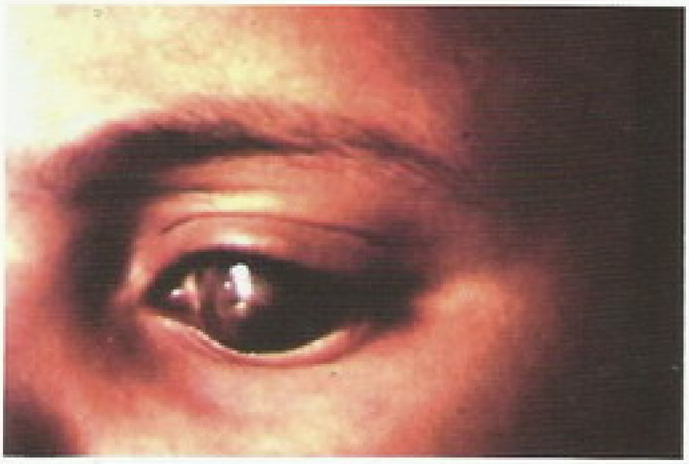
Keratectazia



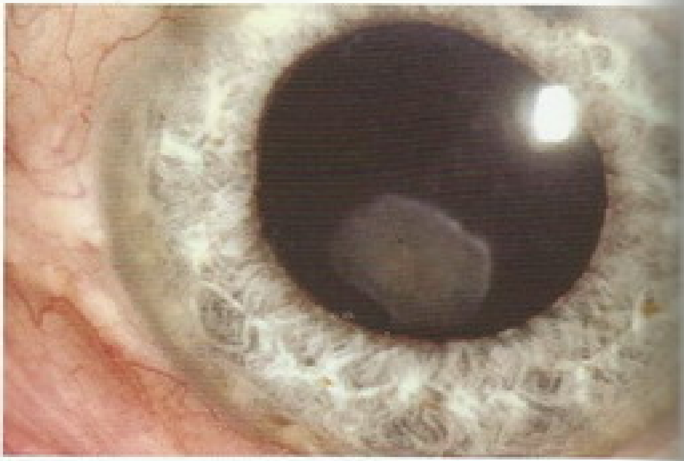
Partial anterior staphyloma



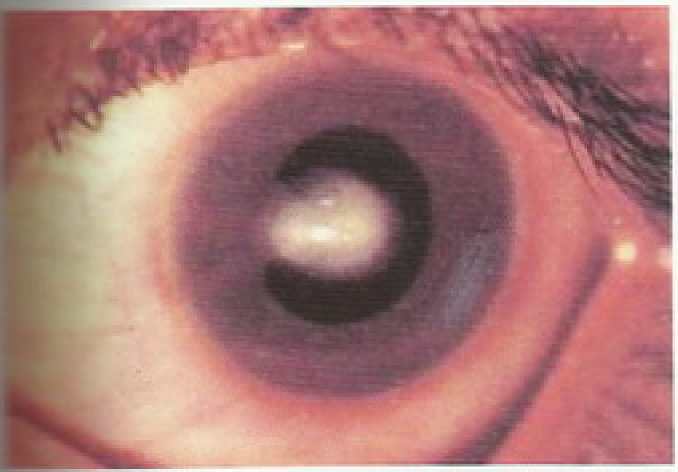
corneal melting + iris prolapse



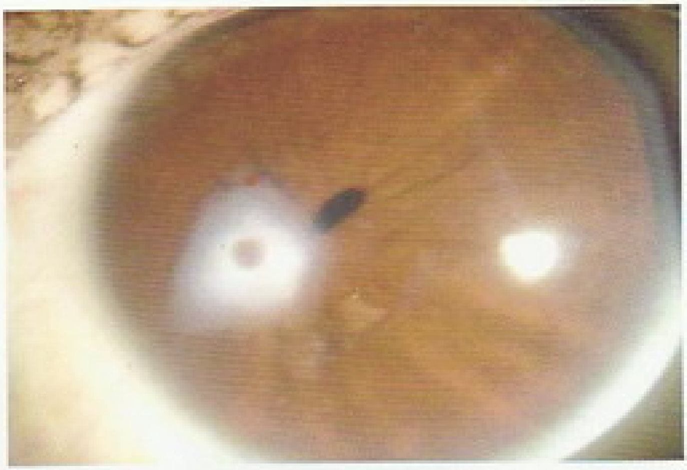
Total anterior staphyloma



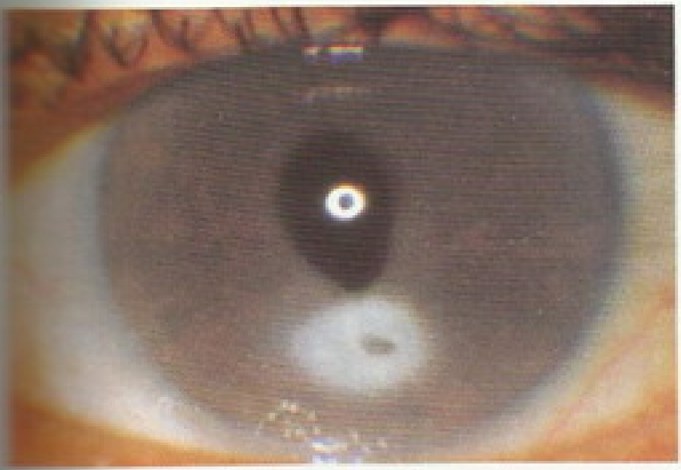
Corneal opacity (nebula)



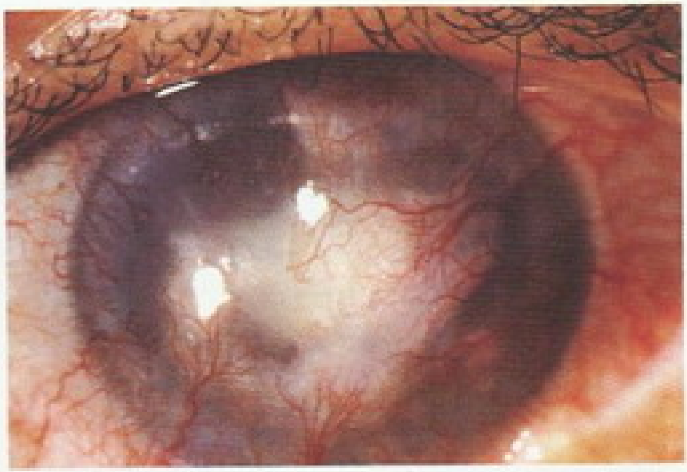
Leucoma adherent



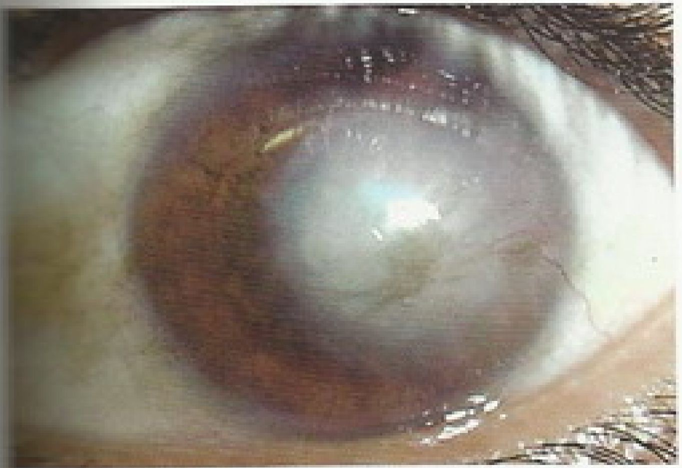
Leucoma adherent



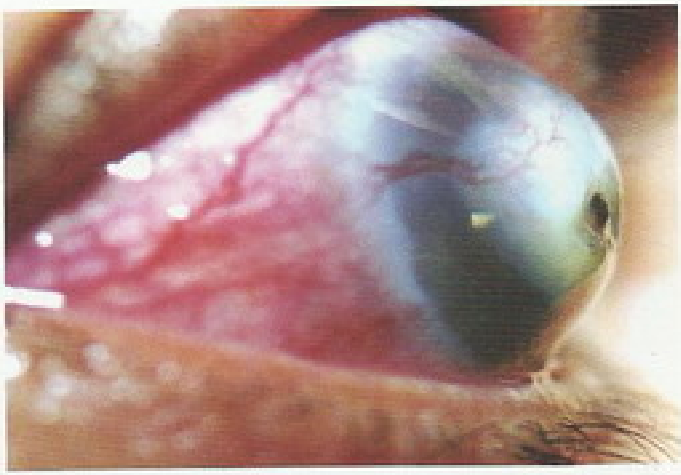
Leucoma adherent (with pear shaped pupil)



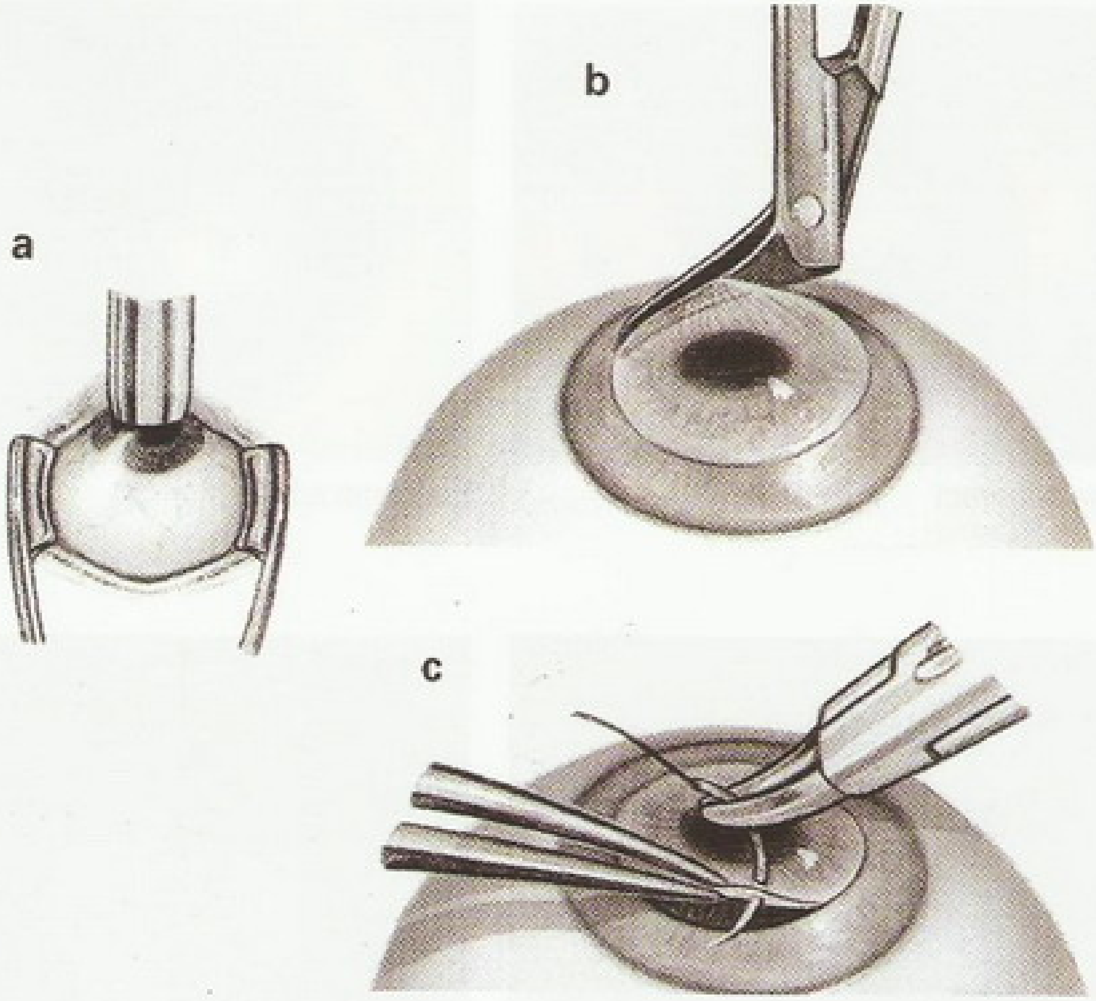
Vascularised leucoma



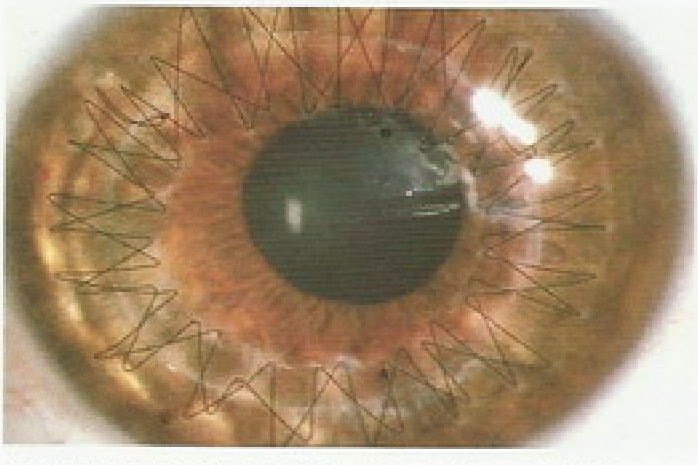
Vascularised leucoma (note : solitary vessel indicates that it was fungal)



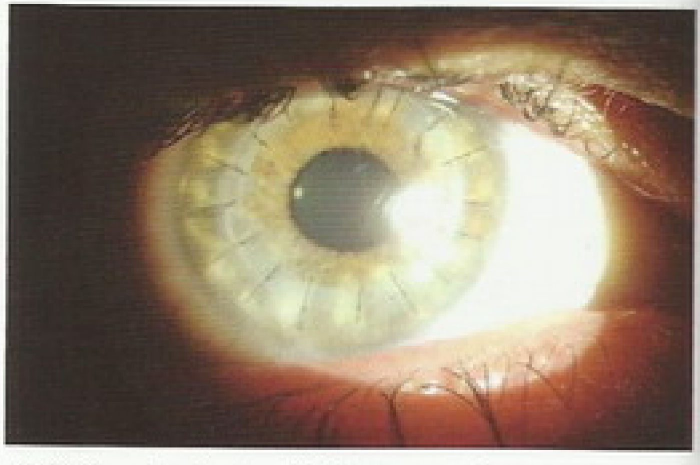
Perforated corneal ulcer with vascularized leucoma



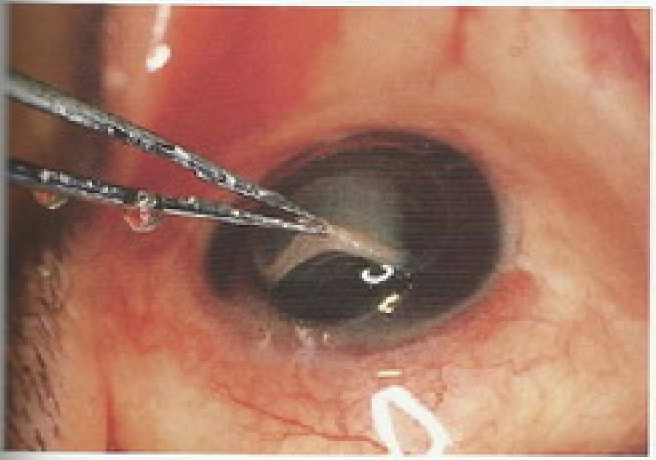
Keratoplasty operation



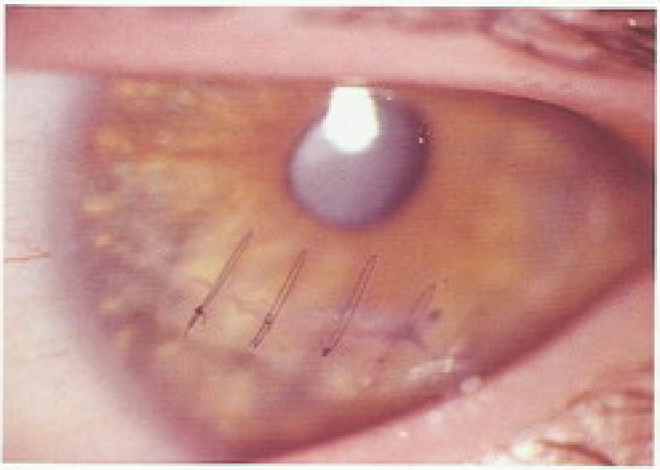
Keratoplasty with continuous sutures (PKP)



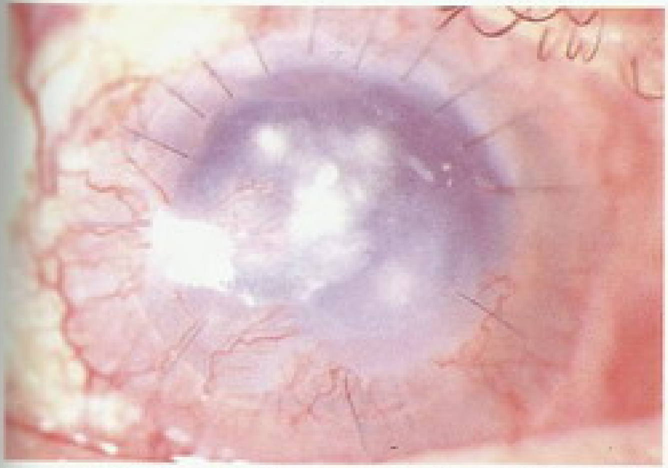
PKP Keratoplasty with Interrupted sutures



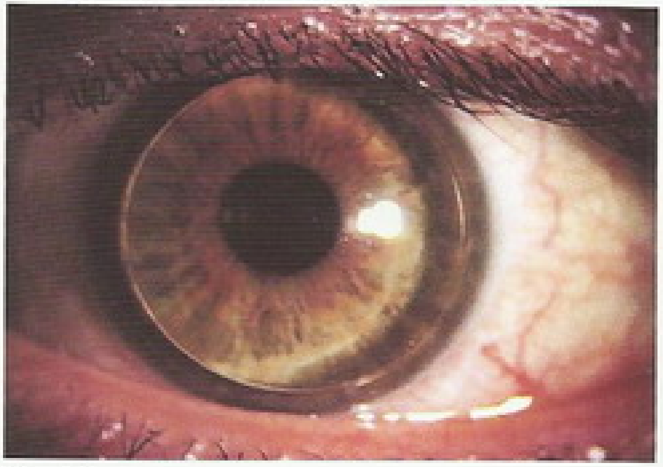
Lamellar keratoplasty



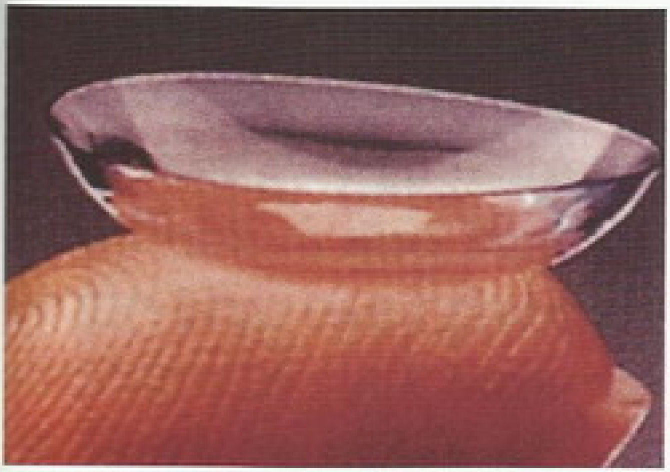
Repaired rupture globe



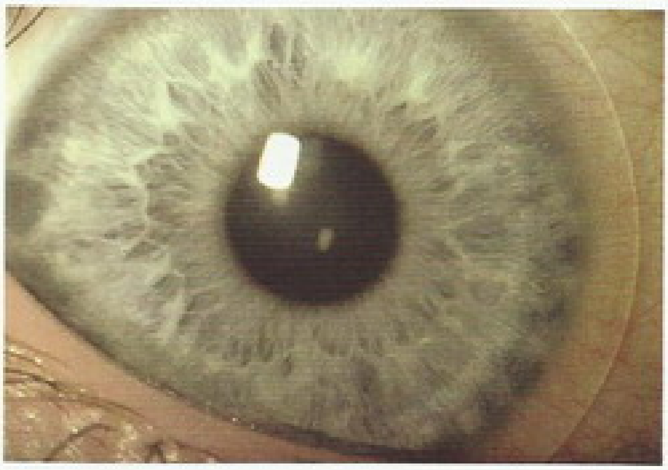
Keratoplasty with interrupted sutures (rejection)



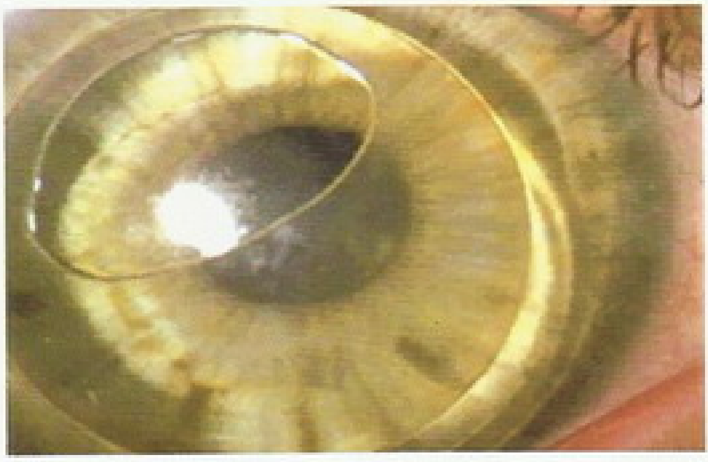
Hard Contact lens



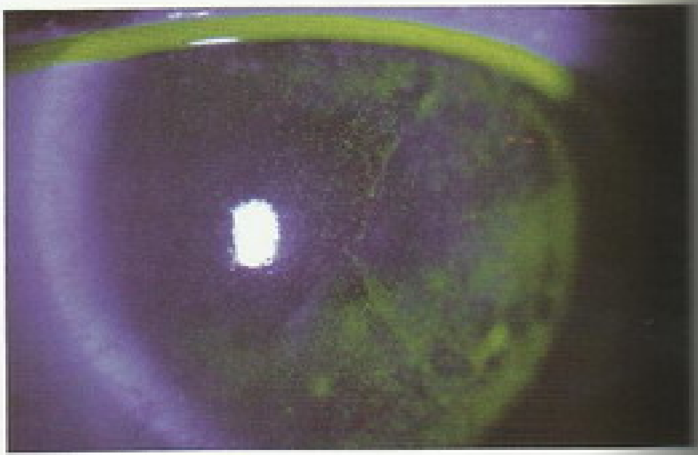
Contact lens (before wearing)



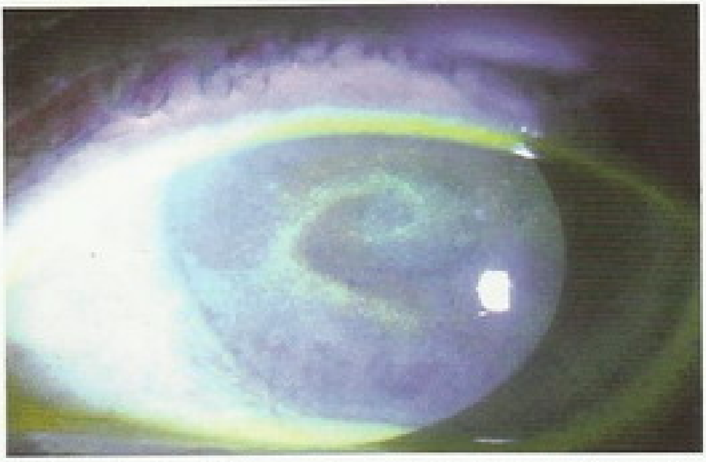
Contact lens



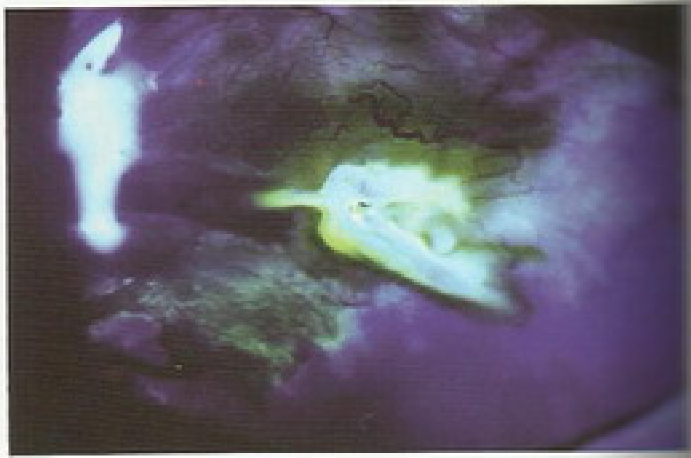
Air bubble under a hard Contact lens



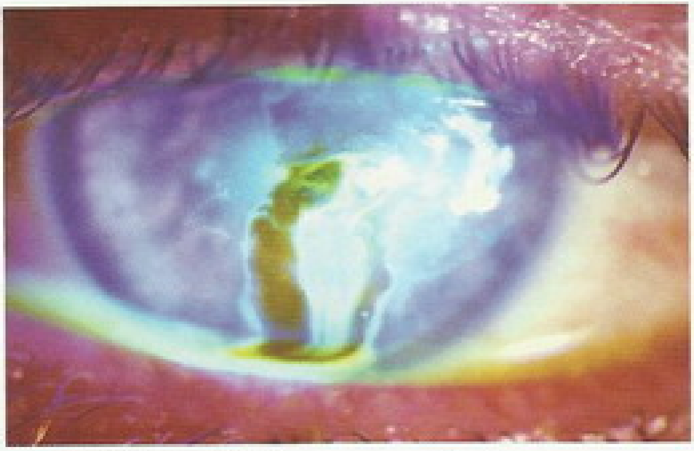
Photophthamia (punctate epithelial erosions stained with fl.)



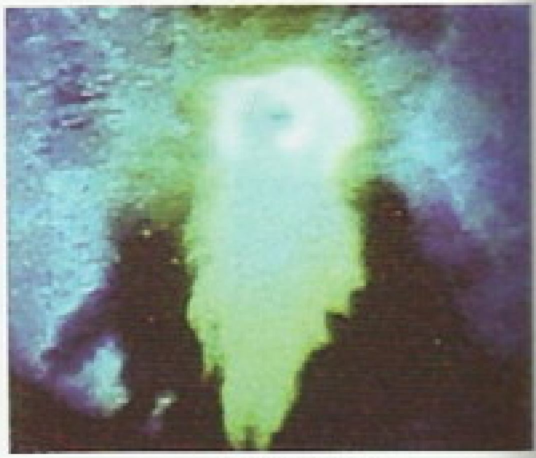
Toxic effect of triflourothymidine (whorl like epithelial lesion)



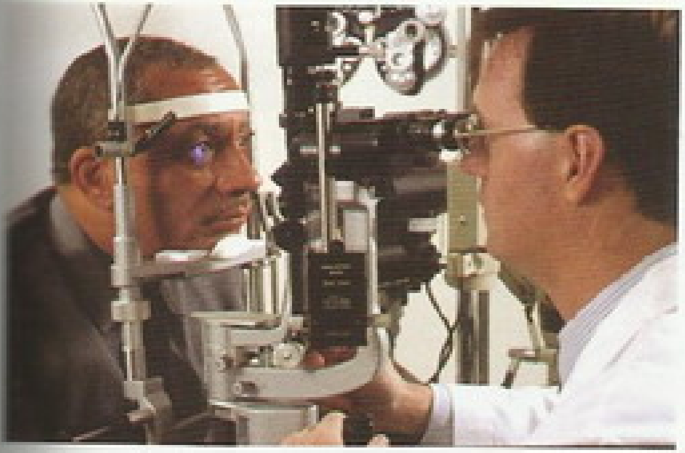
+ ve Seidel test (River green sign)



+ve Seidel test (River green sign)

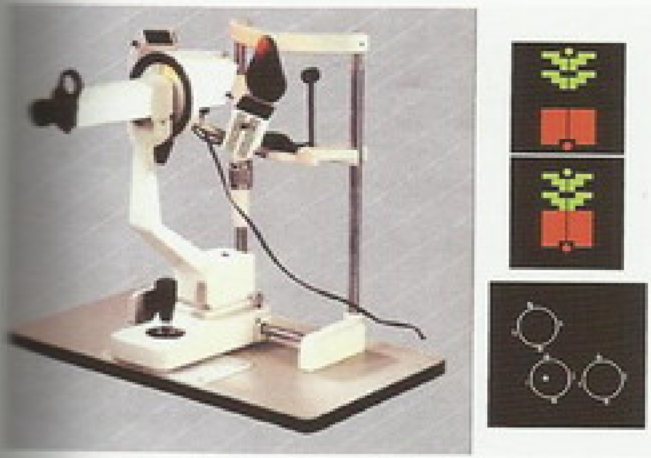


+ ve Seidel test
River green sign

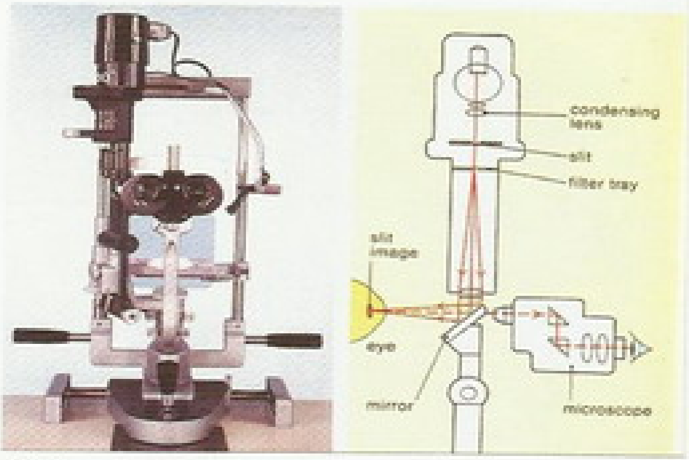


Slit lamp (using cobalt blue filter)

Slit lamp

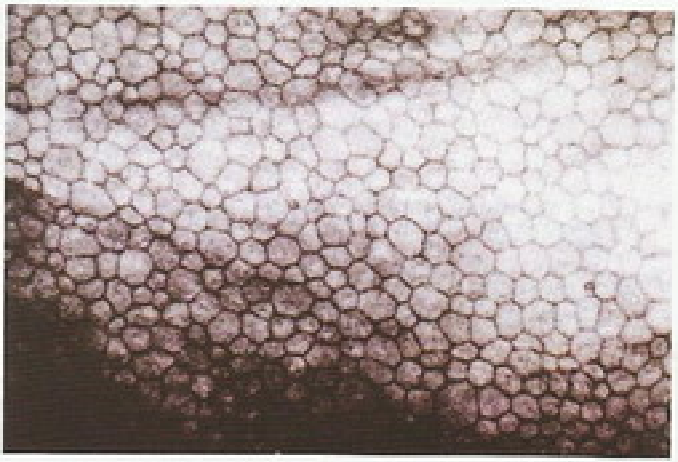


Keratometry for measering the corneal curvature


condensing lens
slit
filter tray
slit image
eye
mirror
microscope

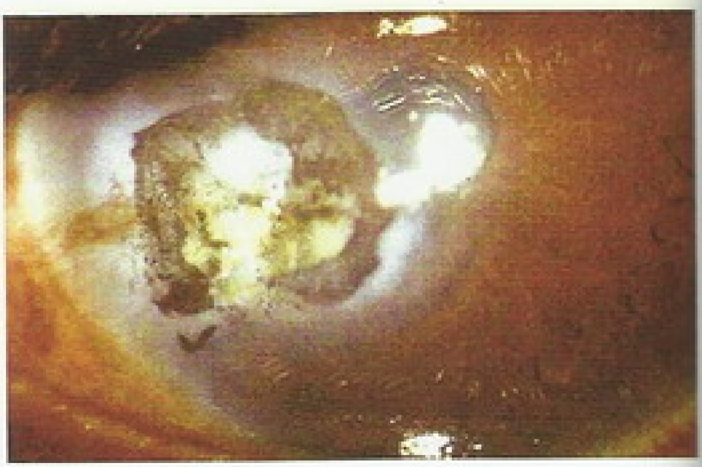
Slit lamp optics

Specular microscope (for endothelial count)

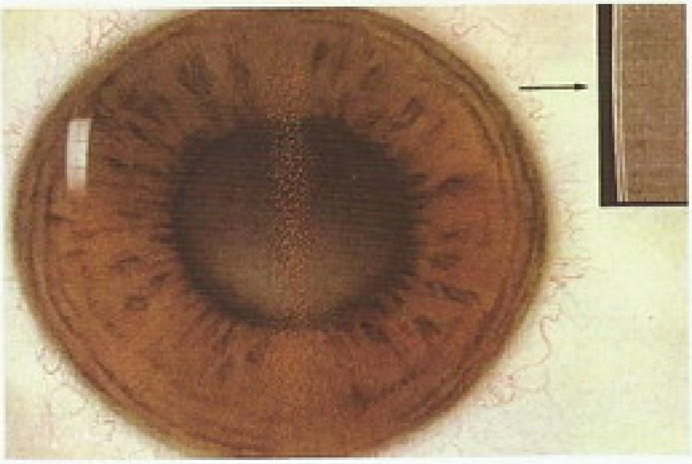


Normal hexagonal endothelium

Fluorescein stain (drops& strips)



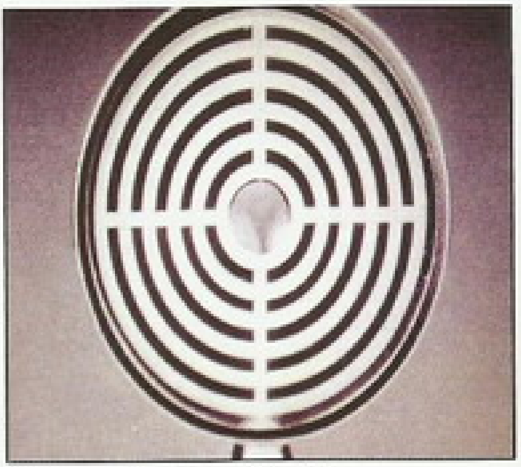
Tattooing of a corneal opacity



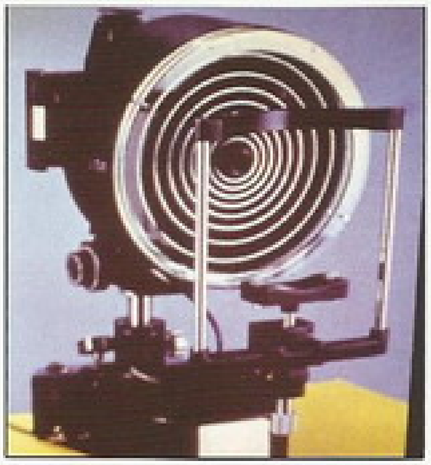
Krukenberg spindle

Pachymetry (for measurement of corneal thickness)

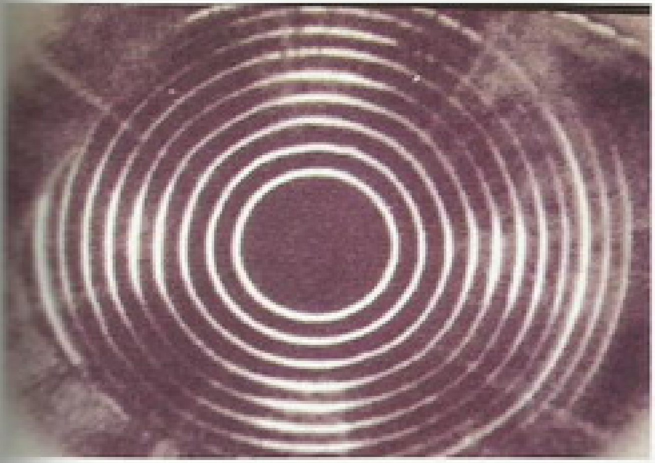
Pachymetry (for measurement of corneal thickness)



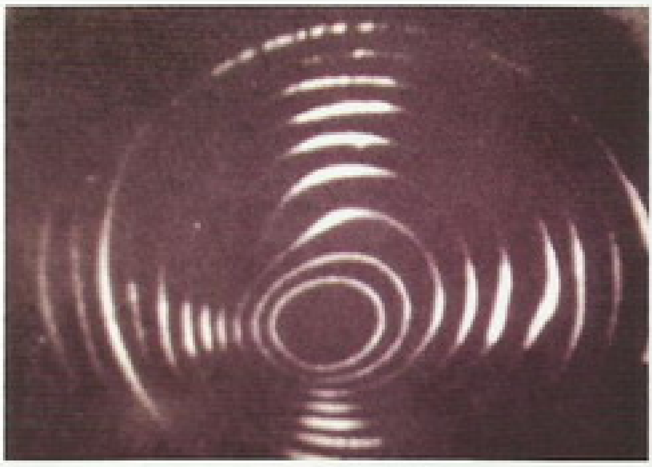
Placcido disc



Placcido disc



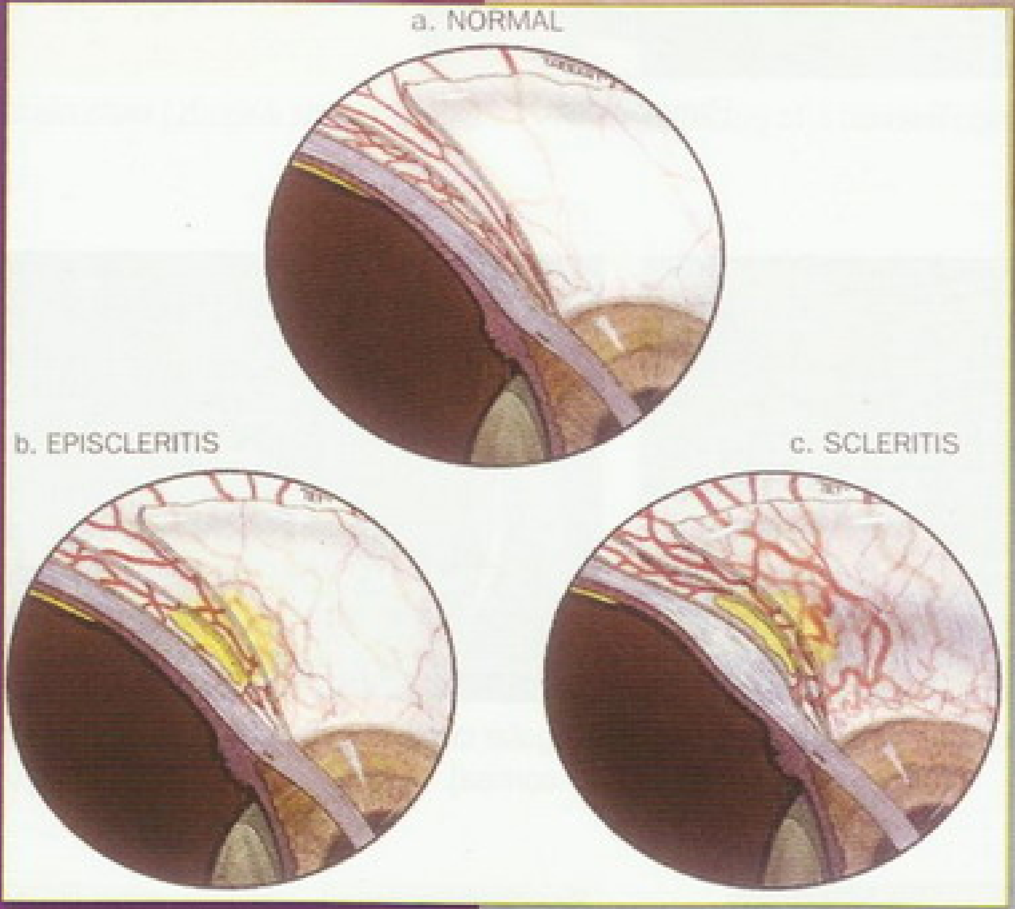
Regular circles on the cornea (indicates normal cornea)

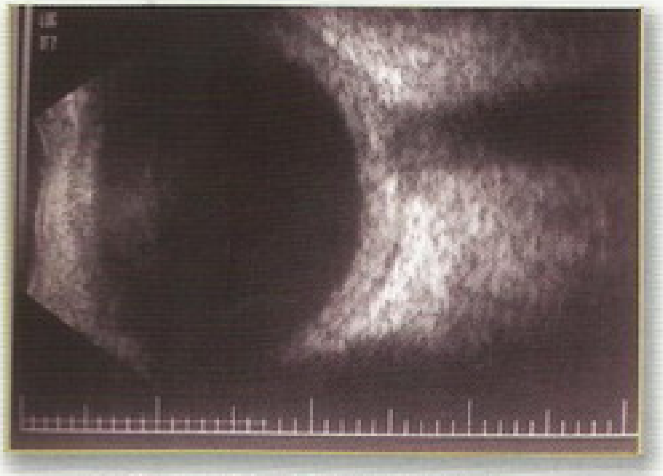


Irregular circles on the cornea (indicates irregular cornea)

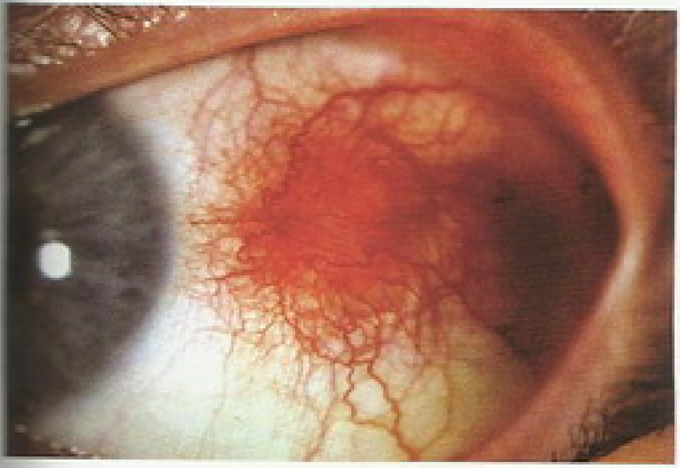
Chapter 5

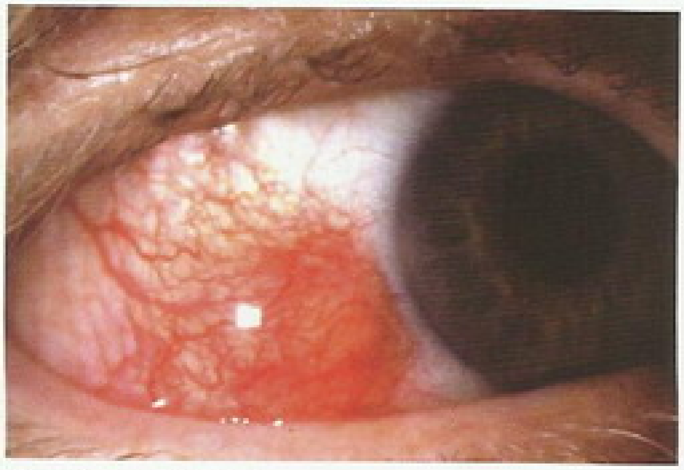
Disorders of The Sclera

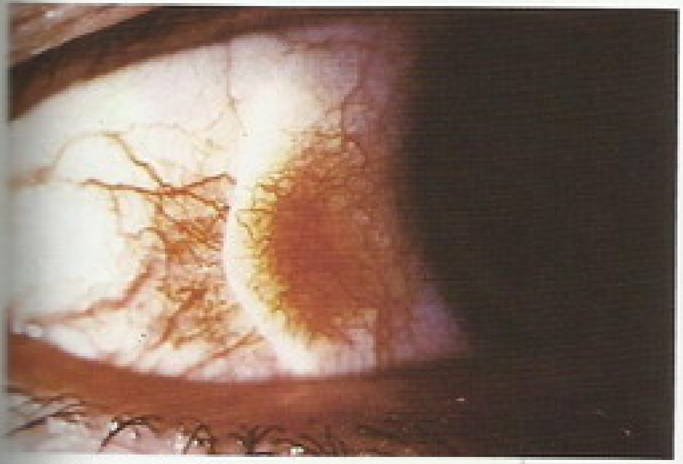

a. NORMAL
b. EPISCLERITIS
c. SCLERITIS

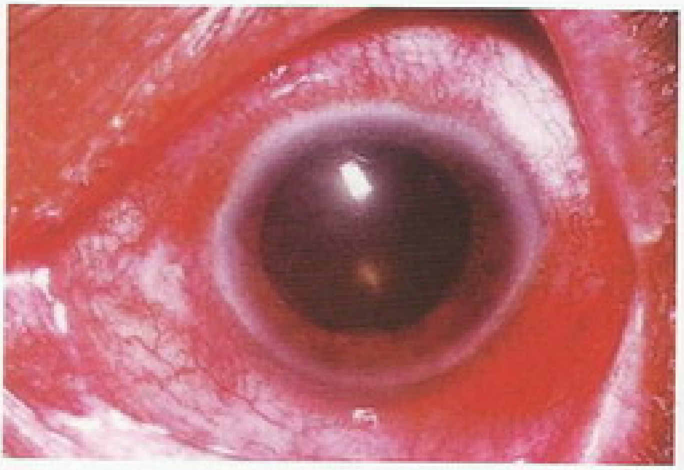


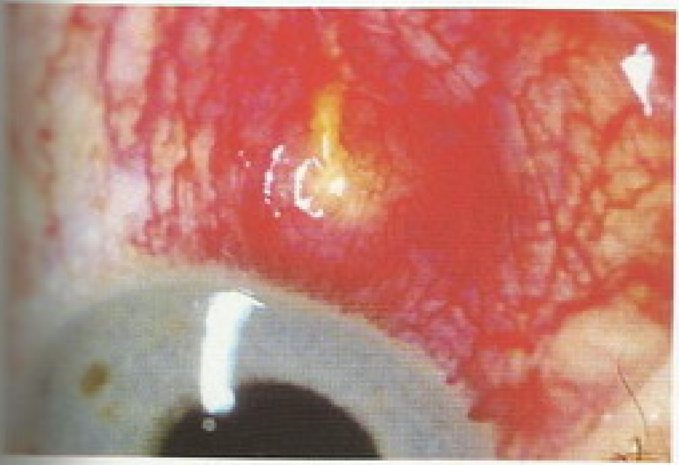
U/S showing thickned sclera
& fluid in subtenon space >> T sign
((Scleritis))

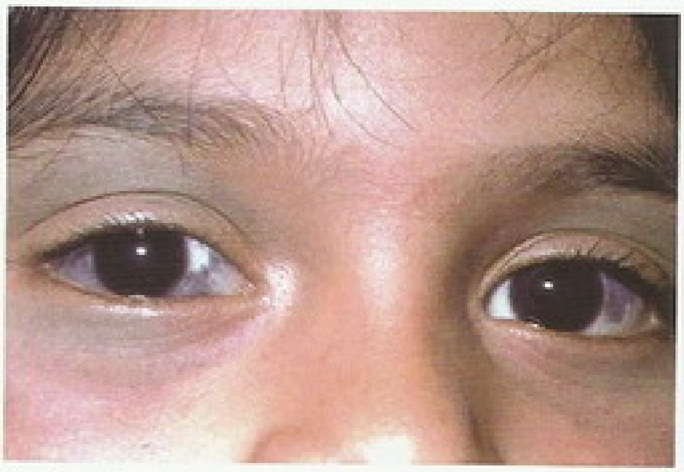

Nodular episcleritis

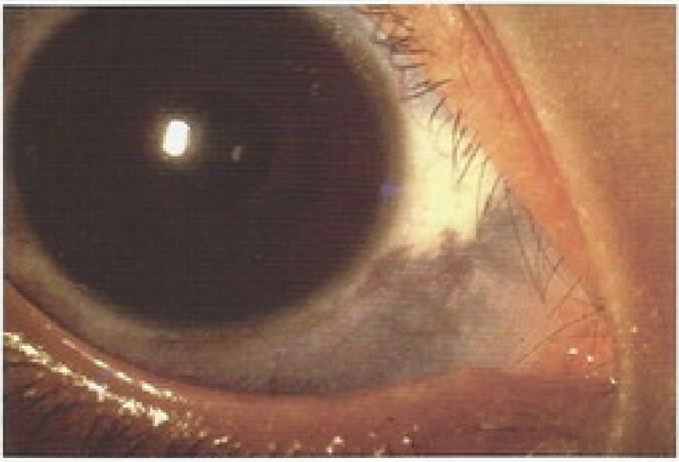

Nodular episcleritis


Nodular episcleritis

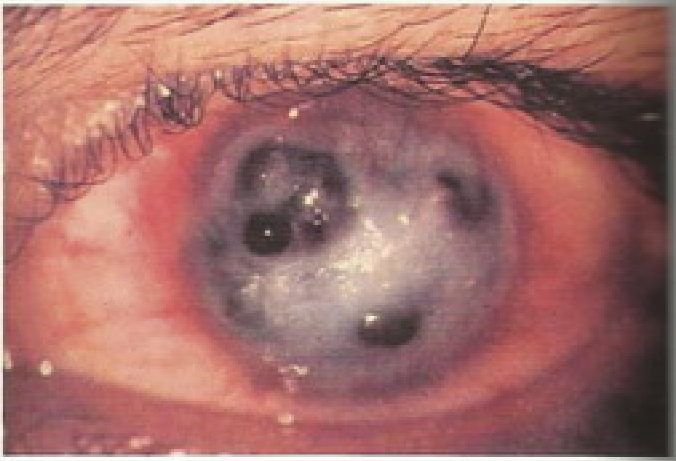

Diffuse scleritis


ecrotizing anterior scleritis

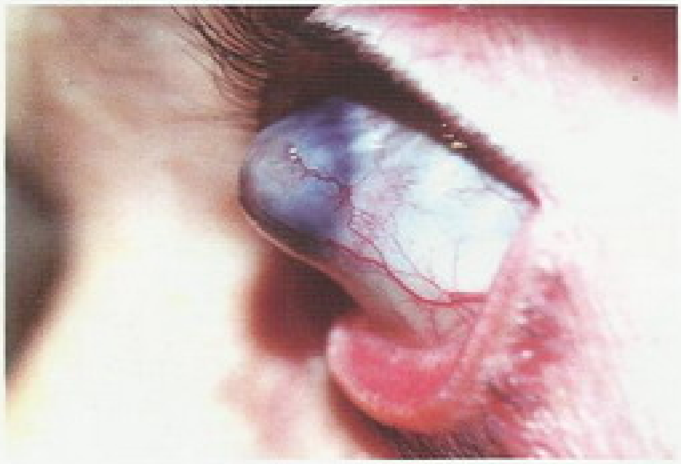

Oculo-dermal melanocytosis



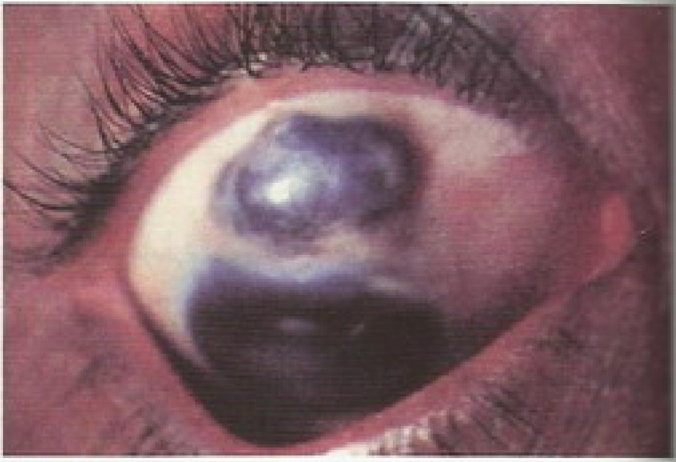
Melanocytosis



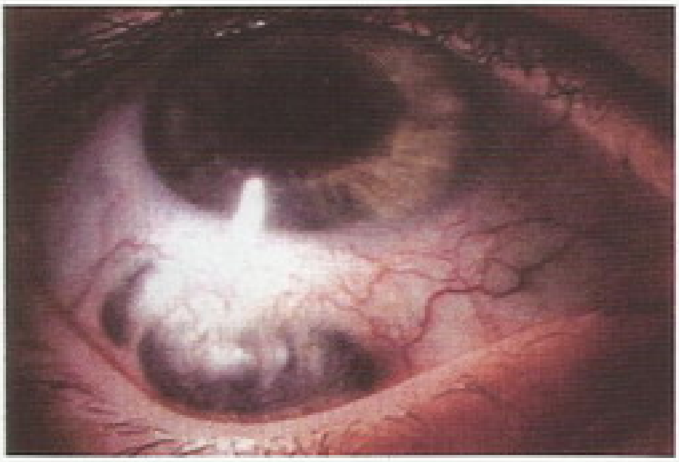
Anterior staphyloma



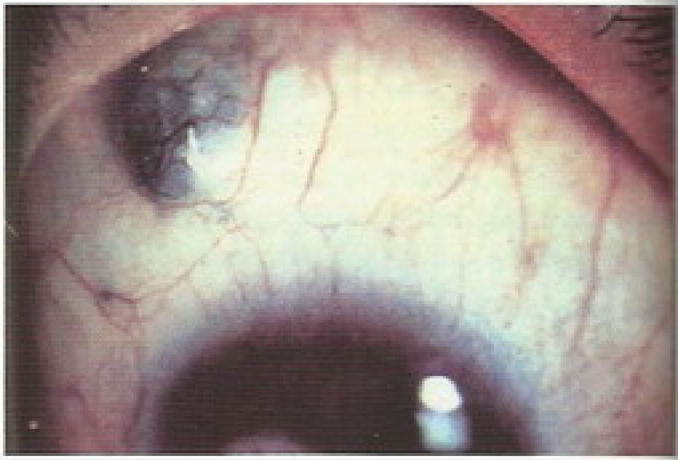
Anterior staphyloma



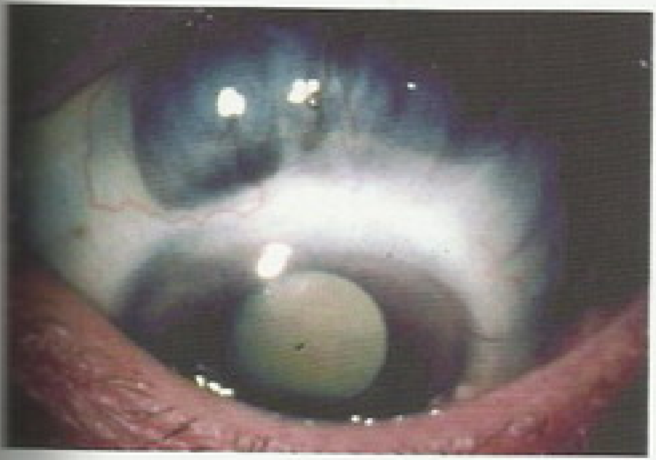
Intercalary staphyloma



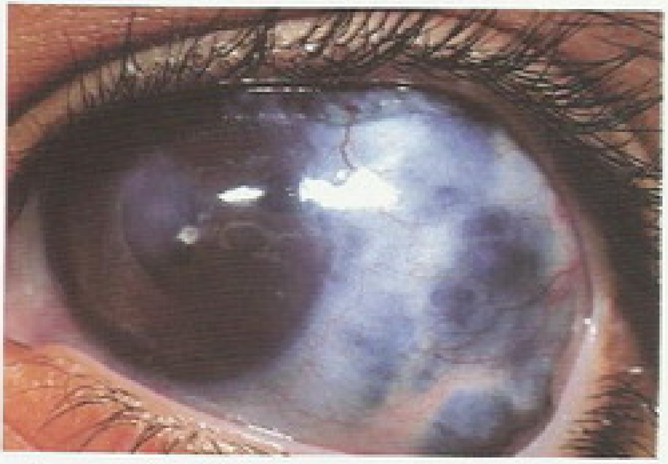
Ciliary staphyloma



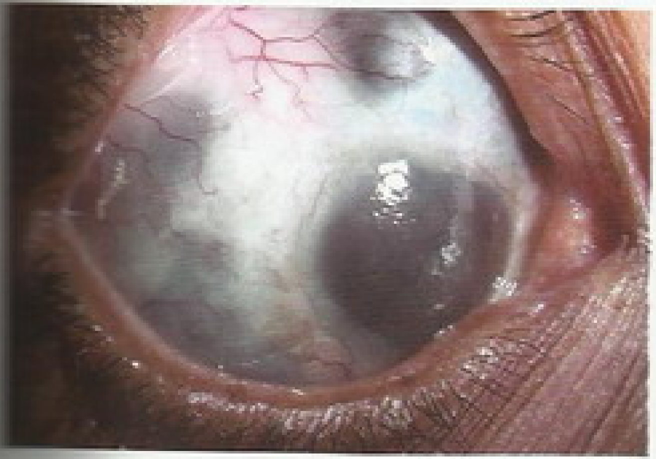
Ciliary staphyloma



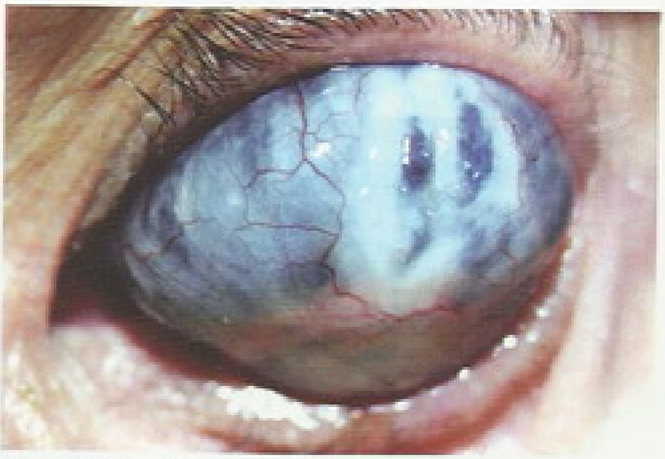
Scleral staphyloma with cataract



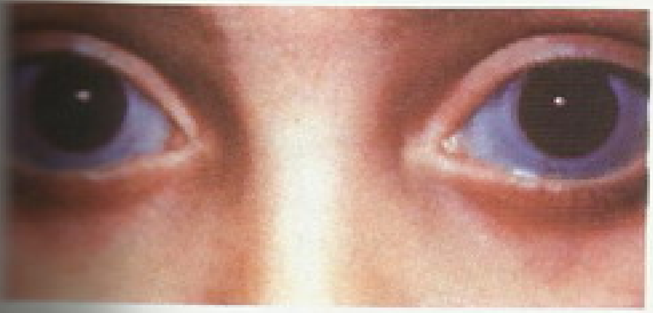
Scleral staphyloma



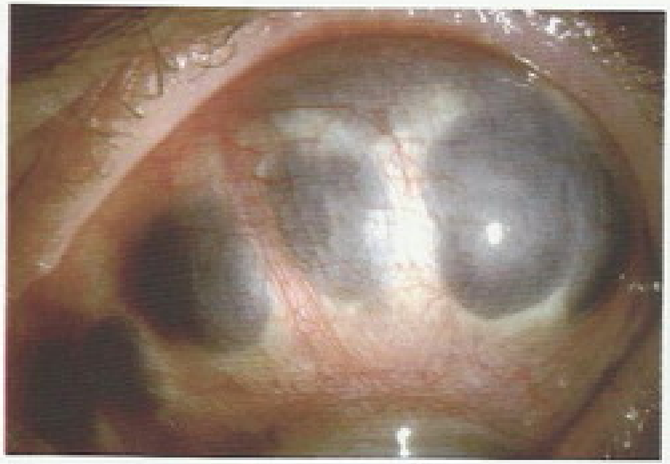
Scleral staphyloma



Scleral staphyloma with corneal opacity



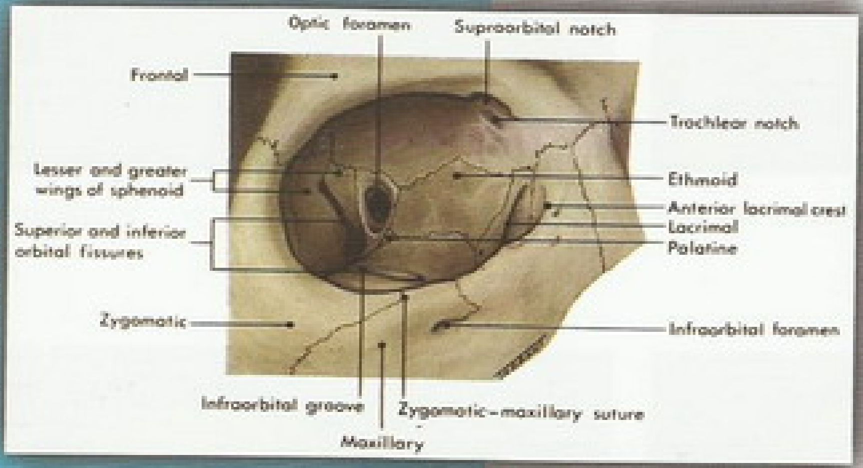
Blue sclera

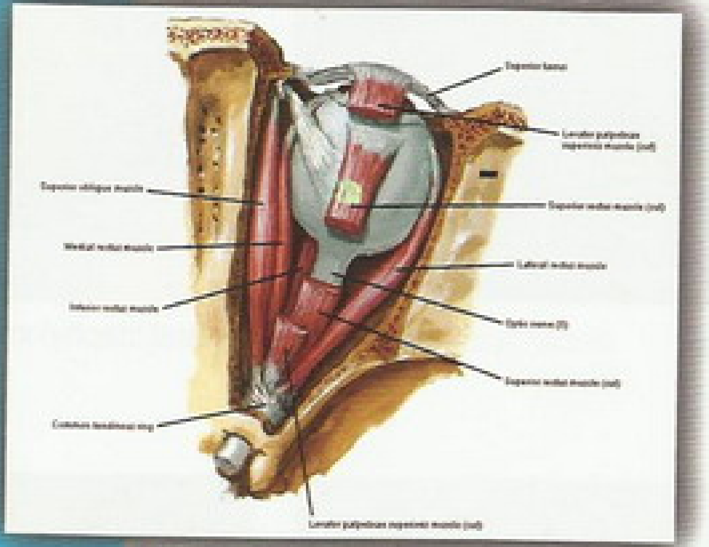


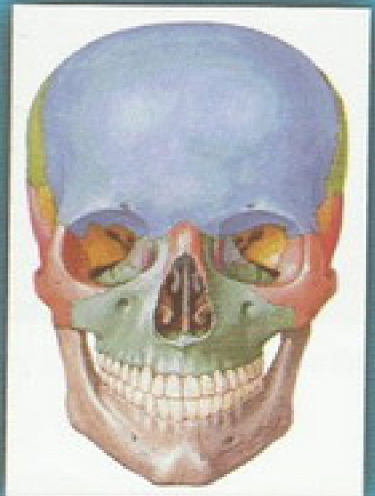
Multiple ciliary staphyloma

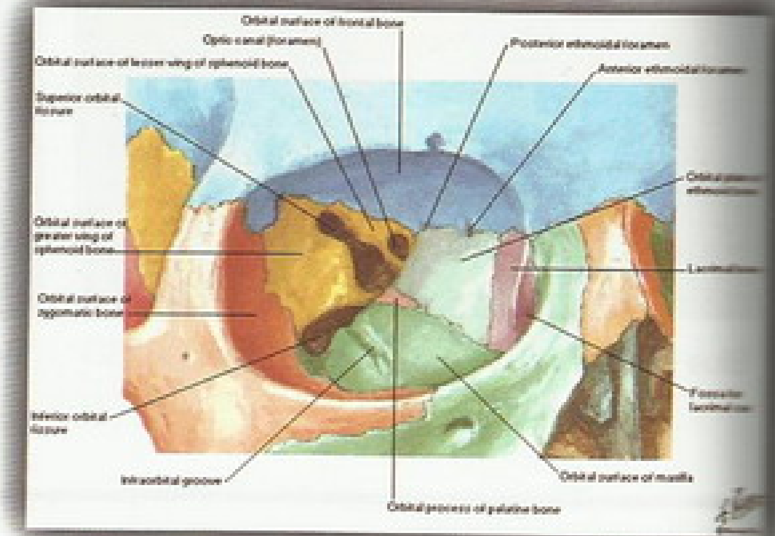
Chapter 6

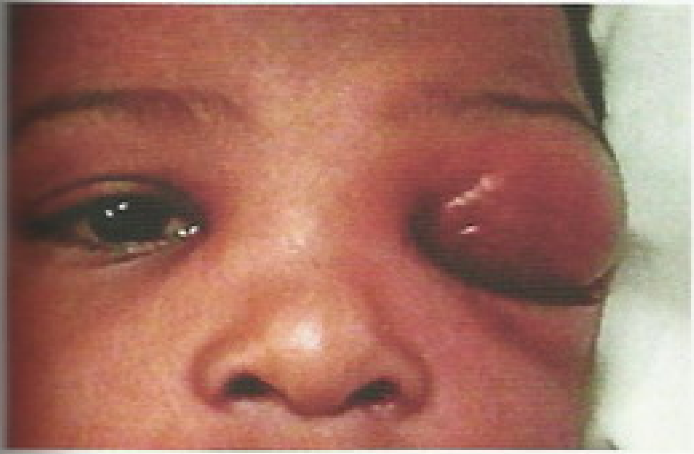
Disorders of the orbit


Optic foramen
Supraorbital notch
Frontal
Trochlear notch
Lesser and greater wings of sphenoid
Ethmoid
Anterior lacrimal crest
Superior and inferior orbital fissures
Lacrimal
Palatine
Zygomatic
Infraorbital foramen
Infraorbital groove
Zygomatic-maxillary suture
Maxillary

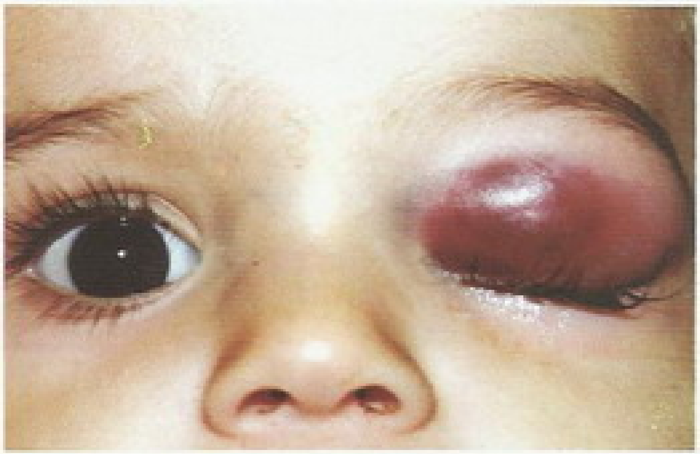

Levator palpebrae superioris muscle (cut)
Superior oblique muscle
Superior rectus muscle (cut)
Medial rectus muscle
Lateral rectus muscle
Inferior rectus muscle
Optic nerve (II)
Superior rectus muscle (cut)
Common tendinous ring
Levator palpebrae superioris muscle (cut)



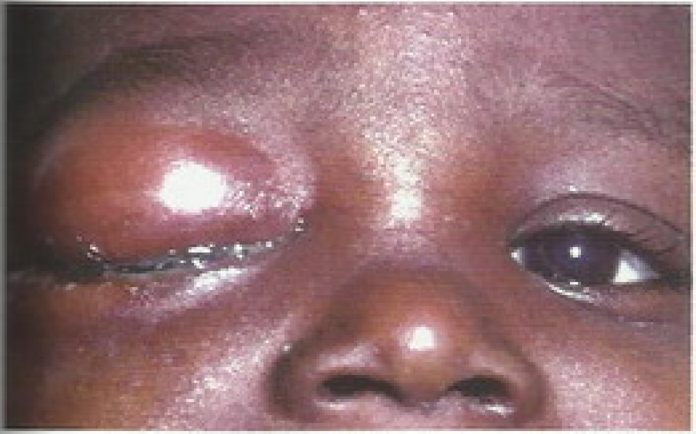

Orbital surface of frontal bone
Optic canal (foramen)
Orbital surface of lesser wing of sphenoid bone
Posterior ethmoidal foramen
Anterior ethmoidal foramen
Superior orbital fissure
Orbital surface of greater wing of sphenoid bone
Orbital surface of zygomatic bone
Inferior orbital fissure
Infraorbital groove
Orbital process of palatine bone
Orbital surface of maxilla



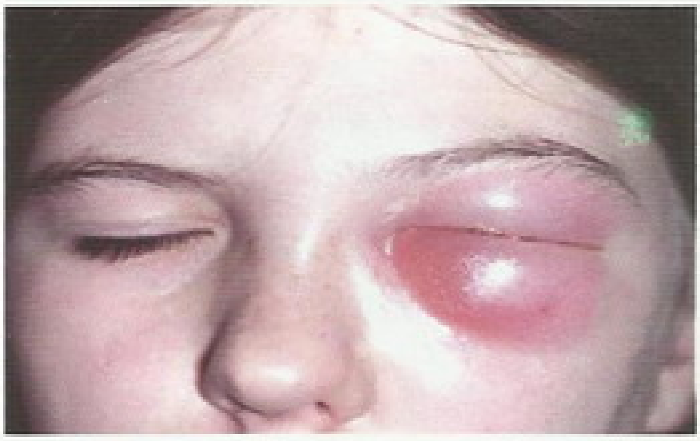
Left orbital cellulites



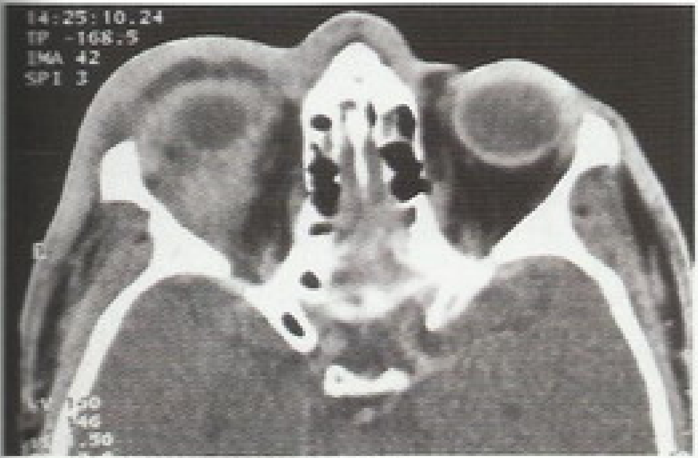
Left orbital cellulites



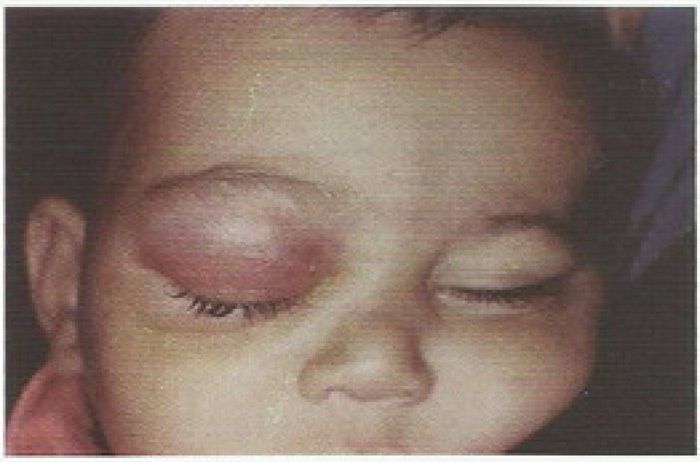
Right orbital cellulites



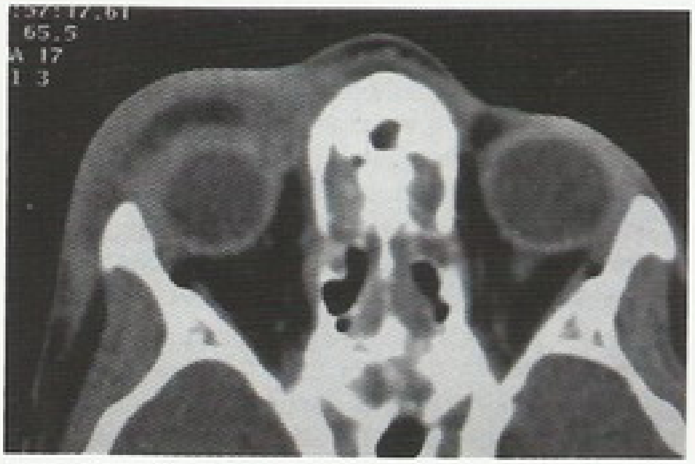
Left orbital cellulitis


14:25:10.24
TP -168.5
IMA 42
SPI 3

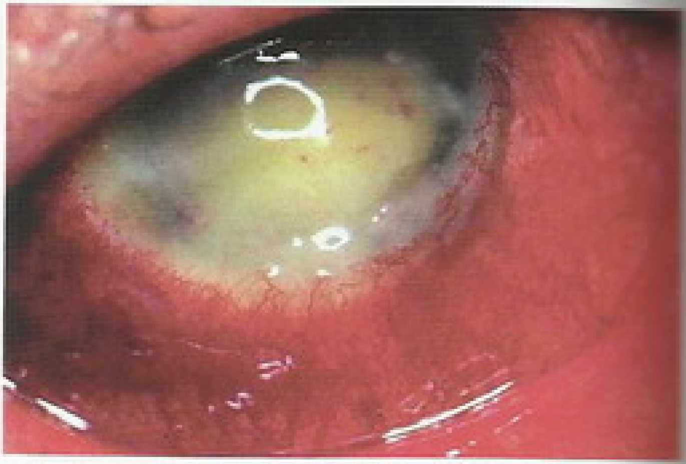
CT showing rt orbital cellulitis



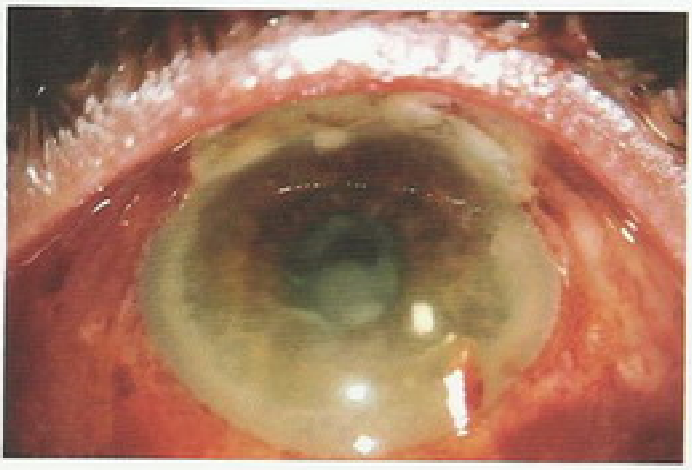
Pre-septal cellulitis



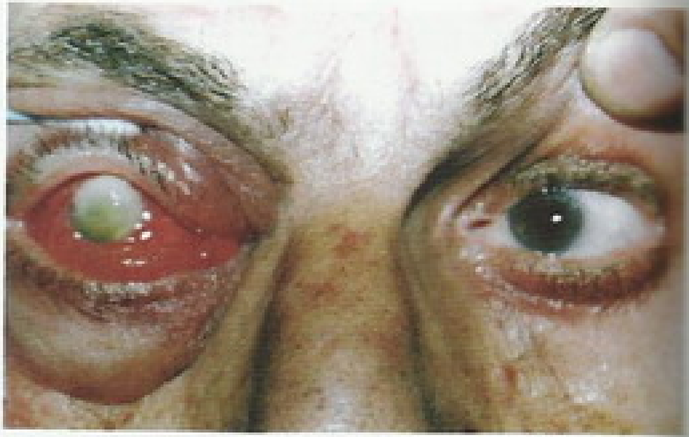
CT showing rt pre-septal cellulitis



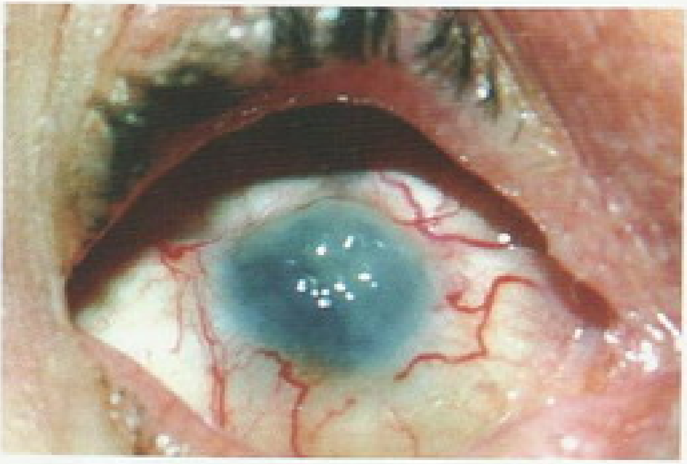
Endophthalmitis



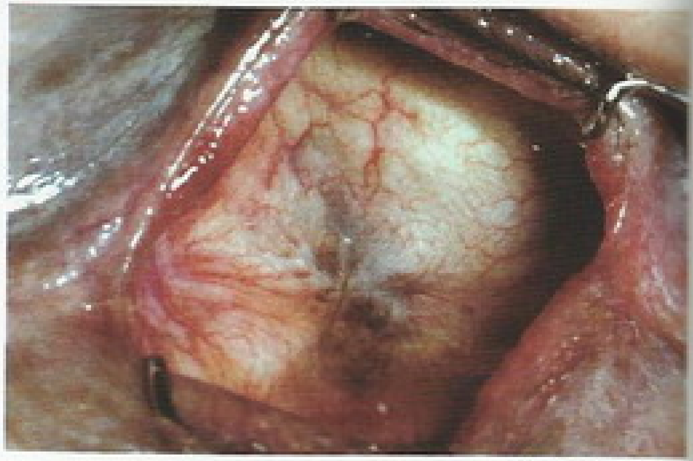
Endophthalmitis



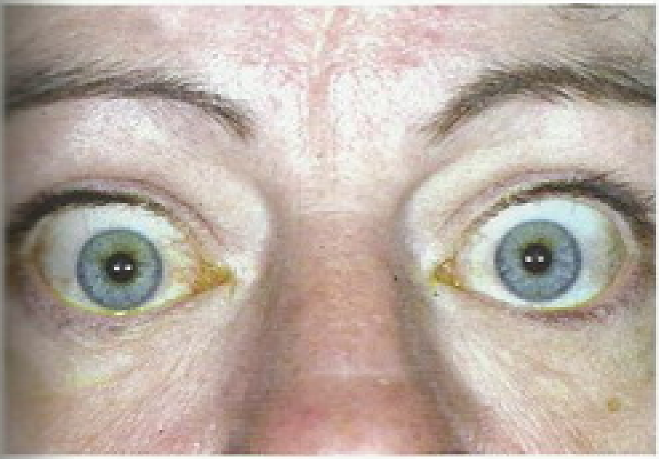
Panophthalmitis (note the limitation of movement of the affected eye)



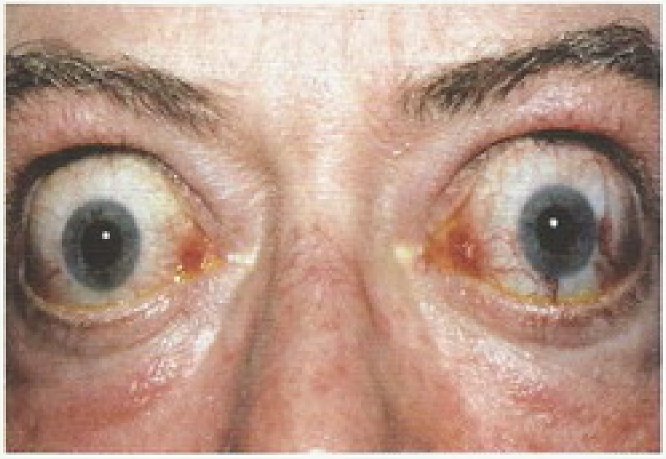
vascularized cornea in atrophic eye



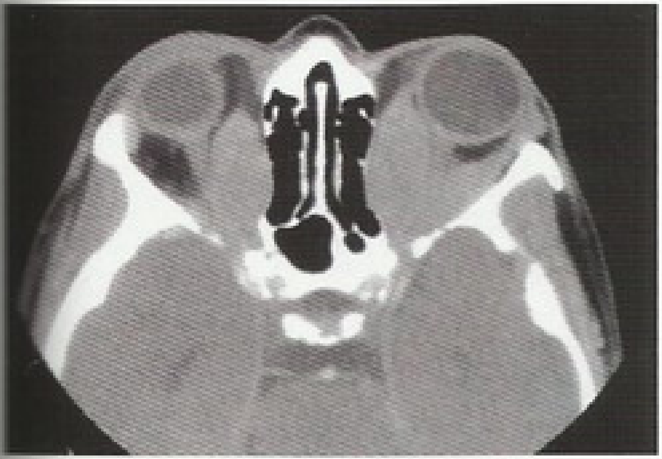
Phthisis bulbi



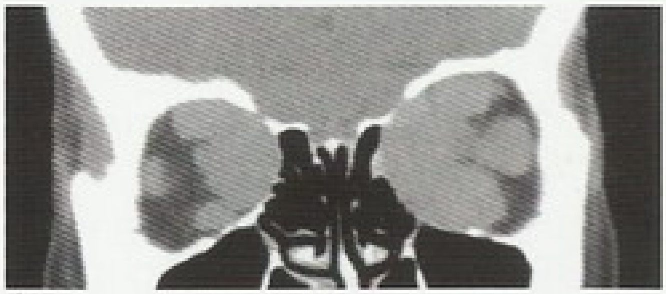
Severe bilateral lid retraction &proptosis (Grave's disease)



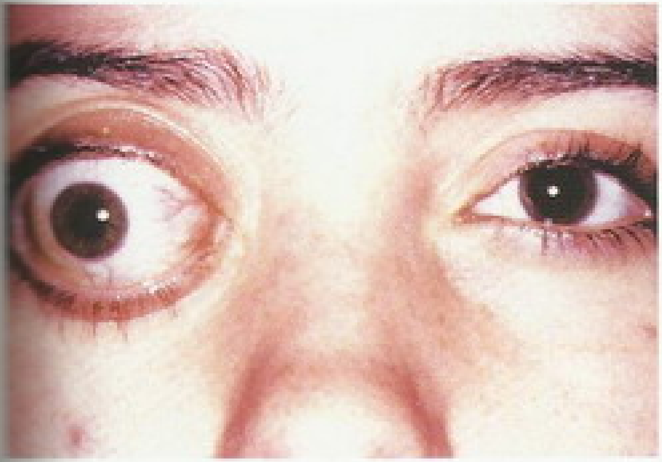
Grave's disease (thyrotoxic exophthalmos)



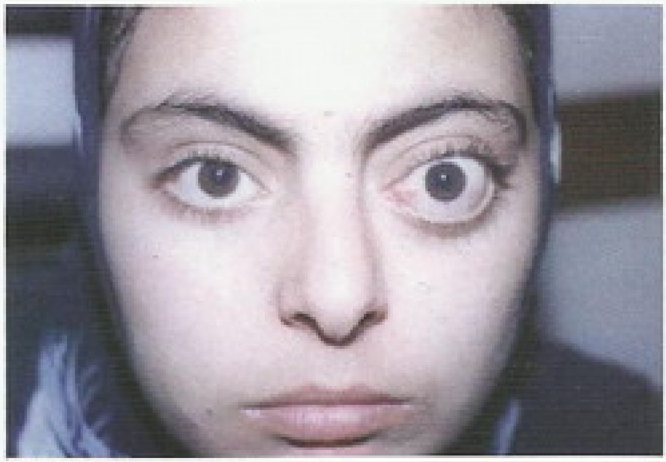
CT shwoing enlargement of extra-ocular ms in case of thyroid eye disease



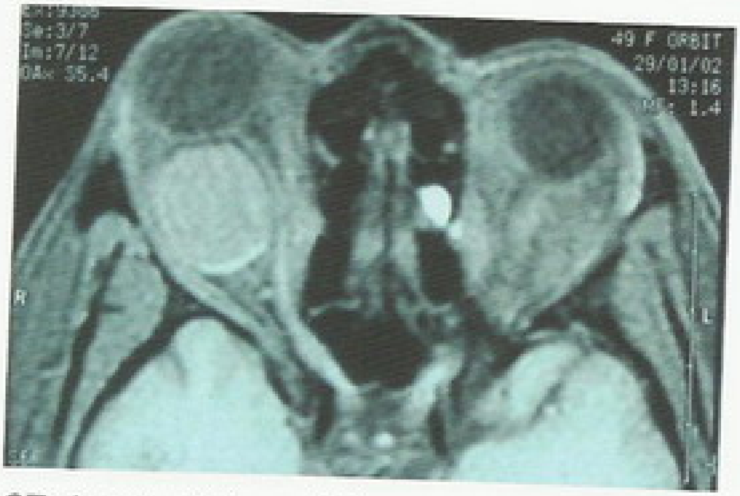
CT shwoing enlargement of extra-ocular ms in case of thyroid eye disease



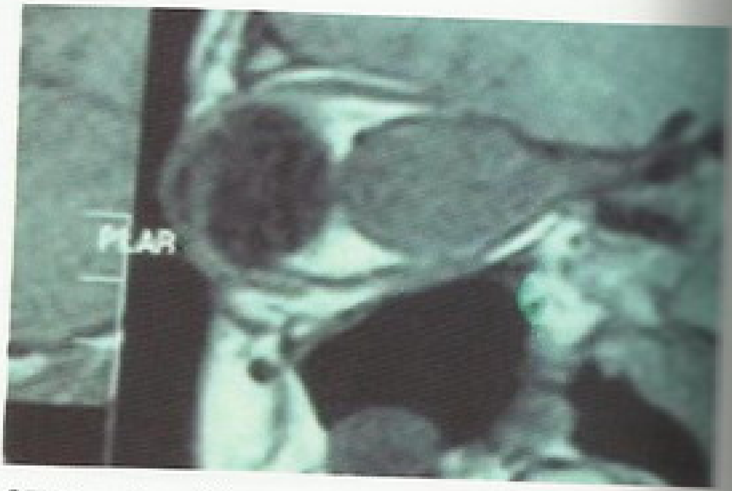
Right severe axial proptosis most probably due to glioma of the optic nerve



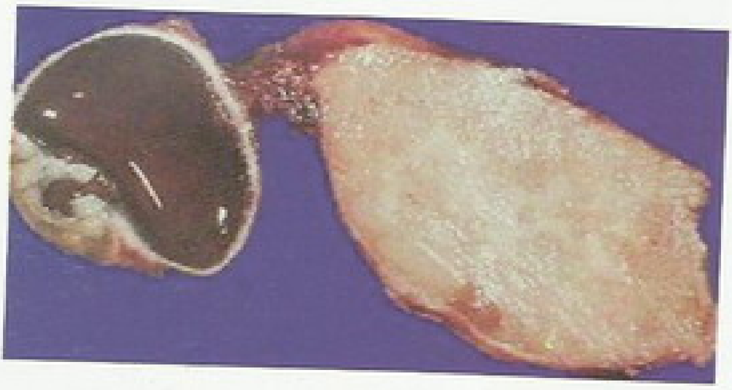
Left axial proptosis most probably due to optic nerve glioma



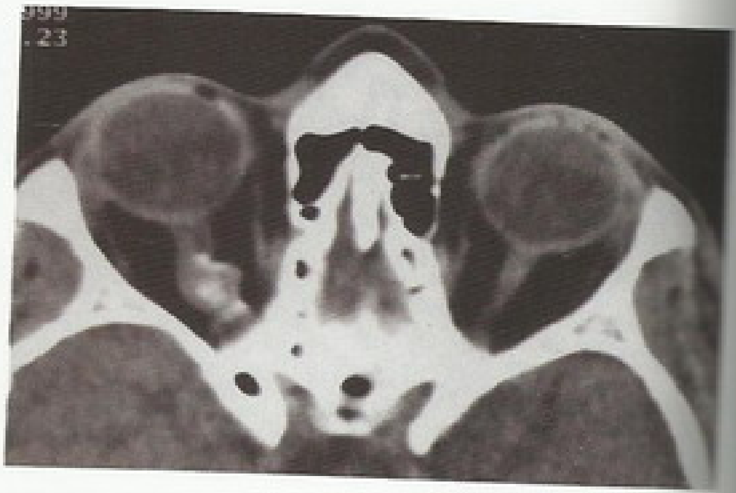
CT showing Glioma of the optic nerve (onion shaped)



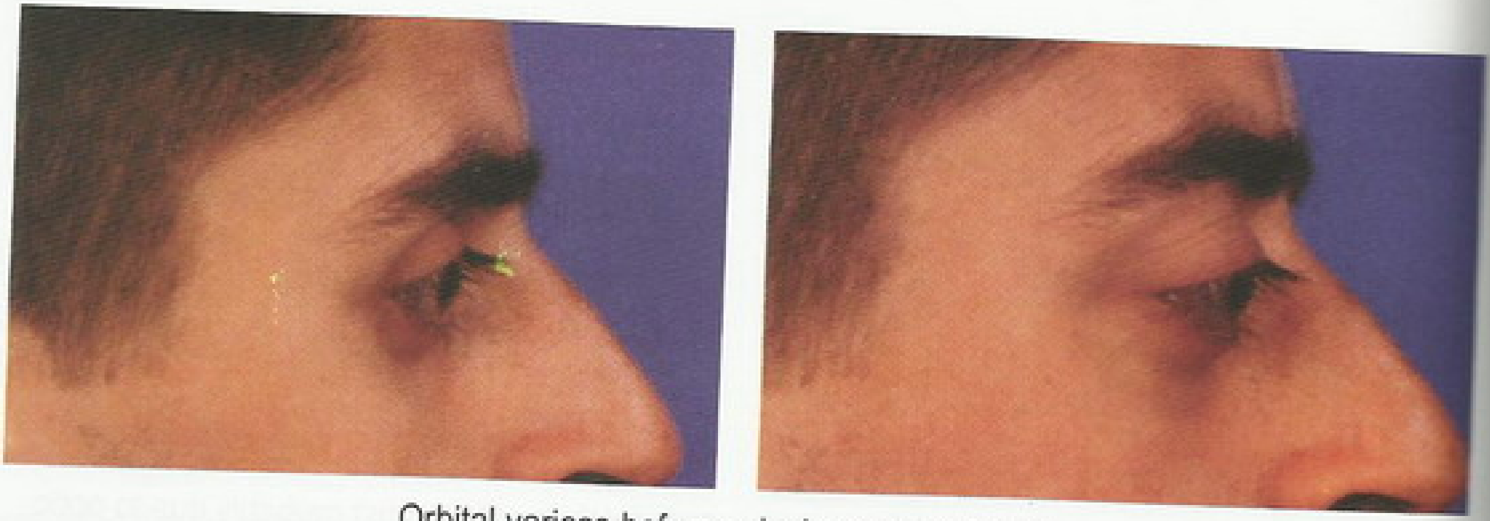
CT showing Glioma of the optic nerve intracanalicular(onion shaped= fusiform shaped)



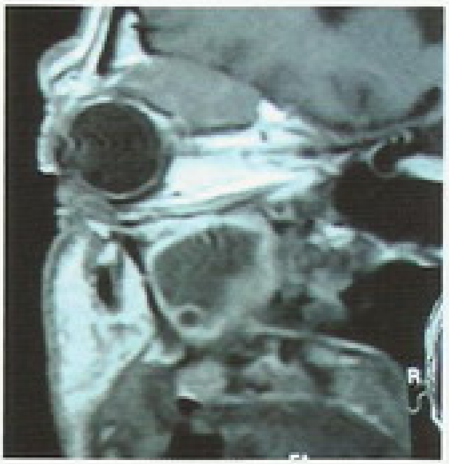
Enucleated eye showing glioma of the optic nerve (cut section is homogenous)



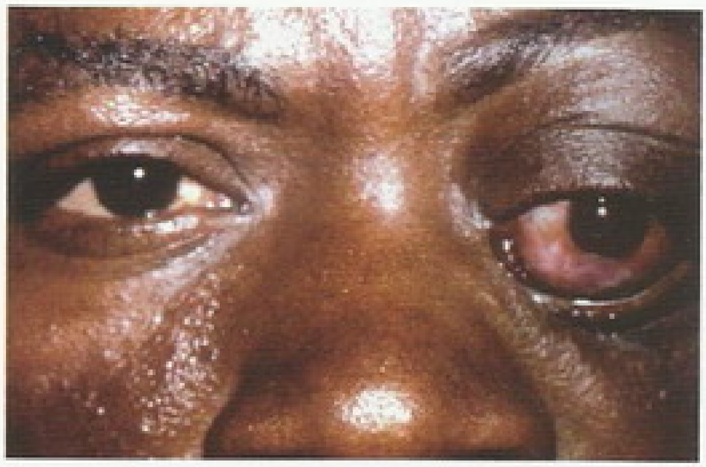
CT showing meningioma of the optic nerve (note thickening& calcification of the optic n.)



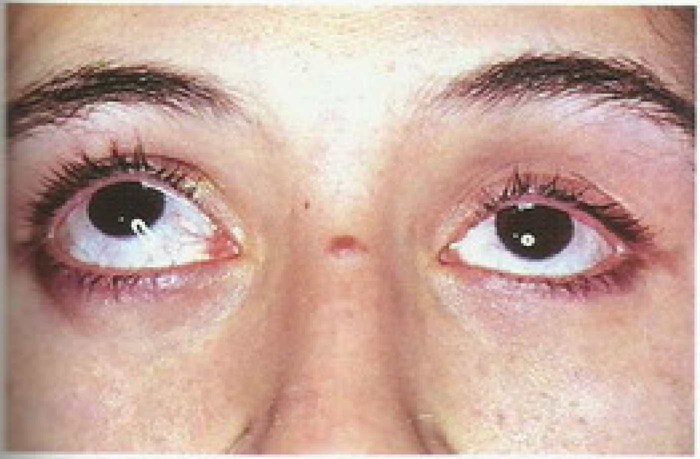
Orbital varices before valsalva- with valsalva



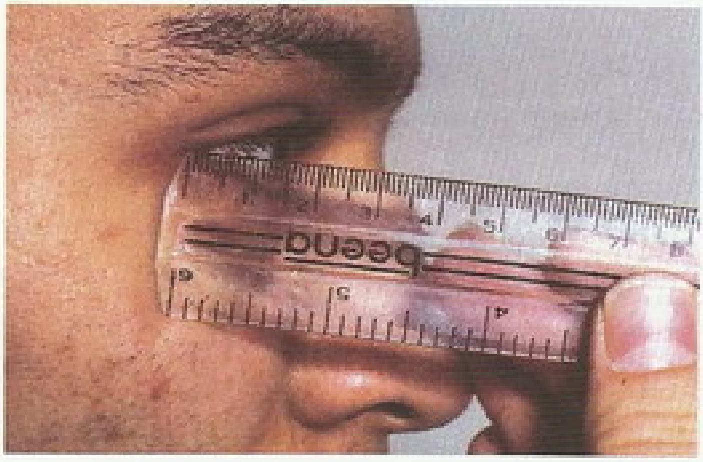
Meningio-encephalocele due to defect in the orbital roof



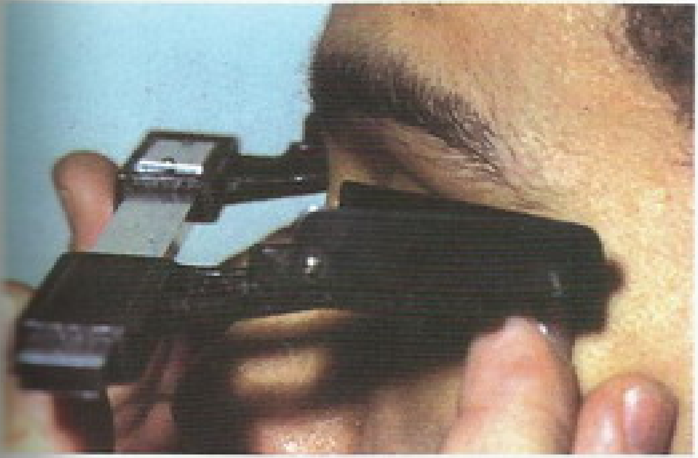
Left proptosis (down& in) most probably due to lacrimal gland mass



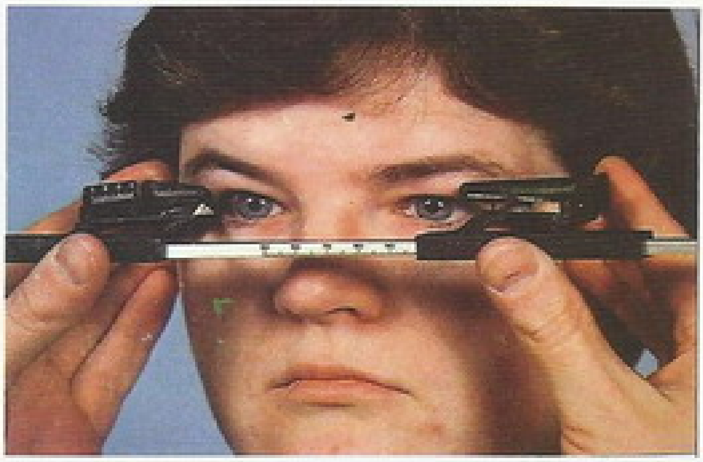
Right proptosis &left enophthamos



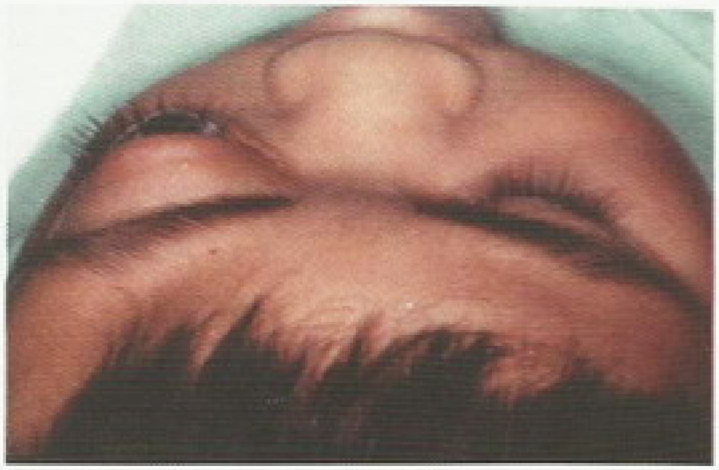
Measurement of globe protrusion with simple ruler



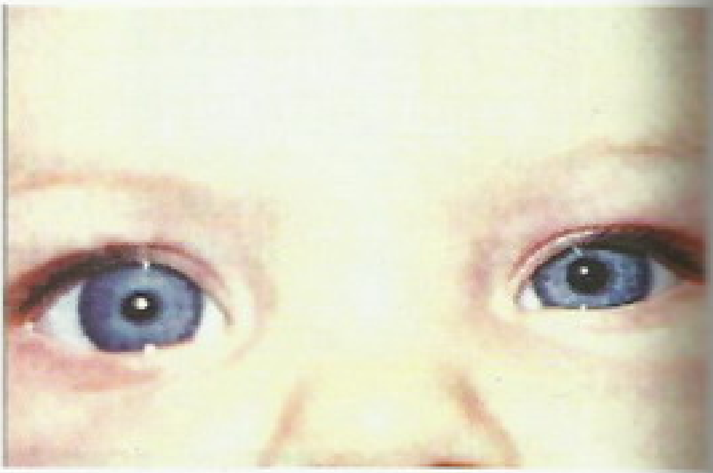
Measurement of globe protrusion with Hertel exophthalmometer



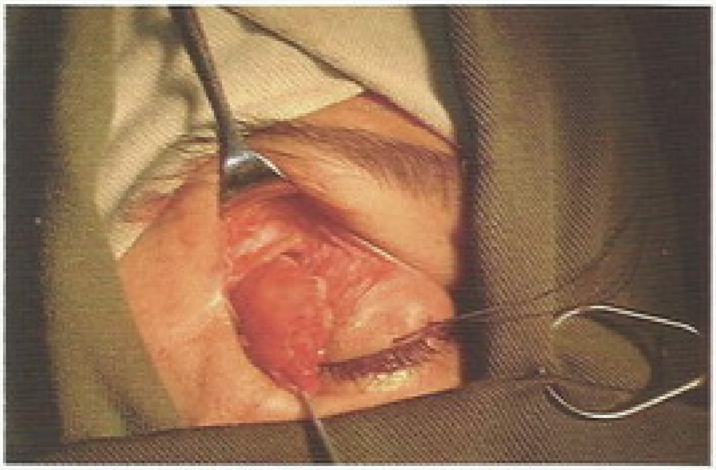
Measurement of globe protrusion with Hertel exophthalmometer



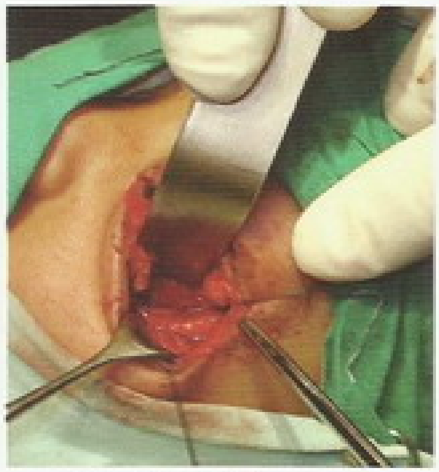
Proptosis (its seen from behind the Pt)



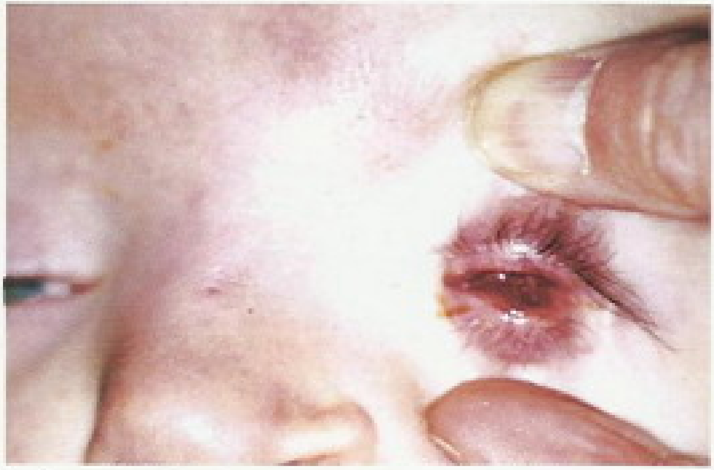
left enophthalmos



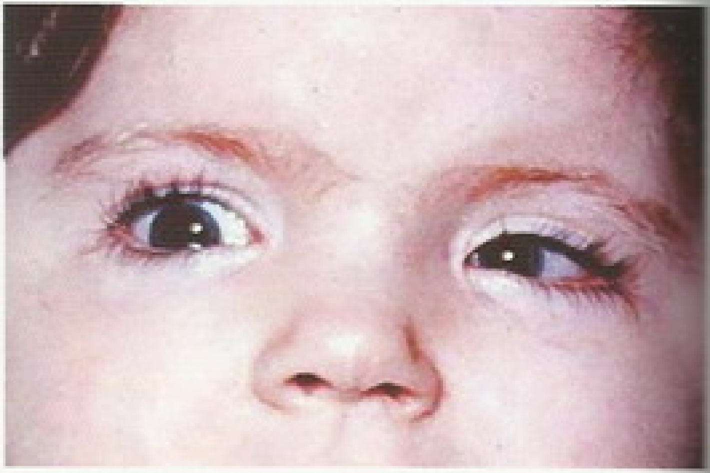
Anterior orbitotomy



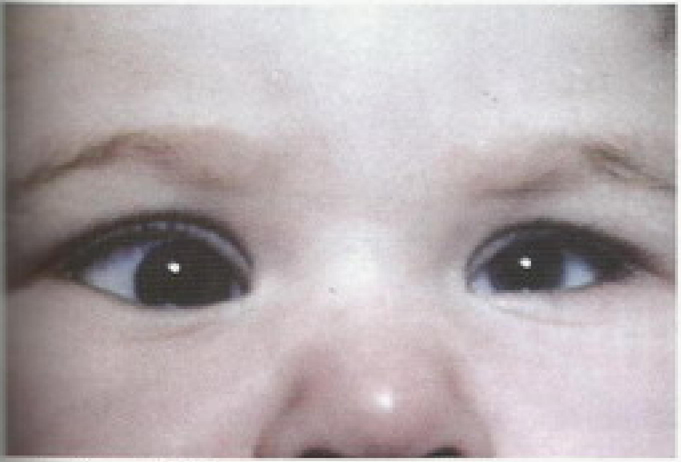
lateral orbitotomy



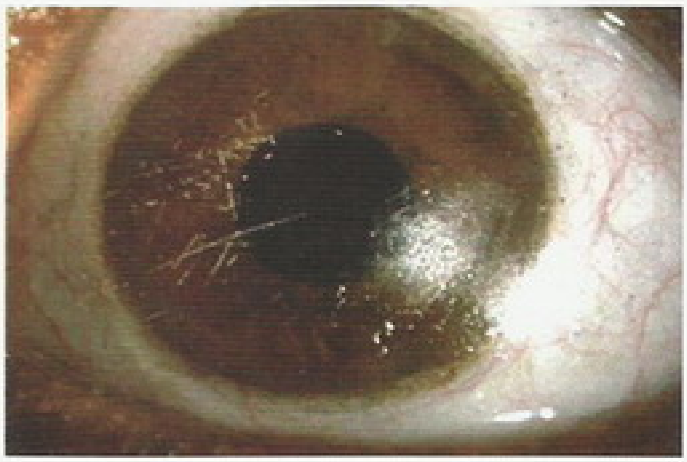
Left anophthalmos



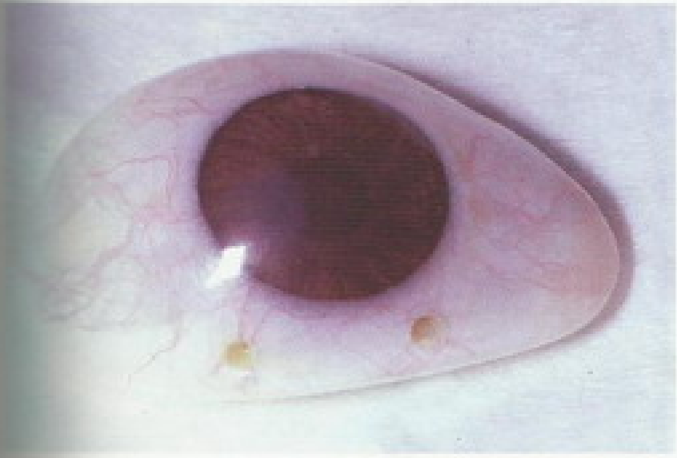
Left microphthalmos



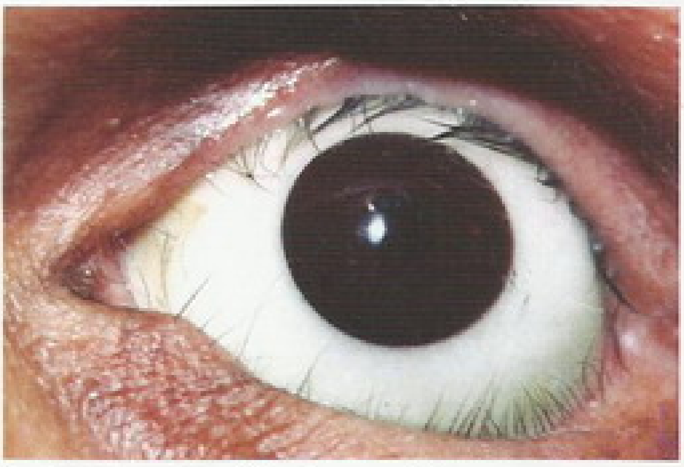
Left microphthalmos



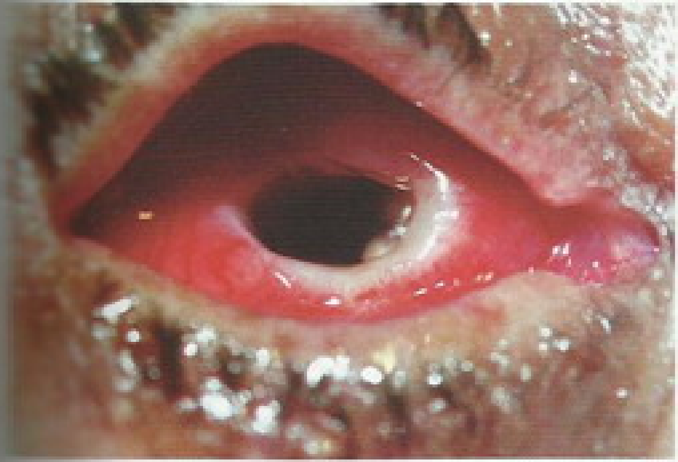
Artificial eye (note the scratches)



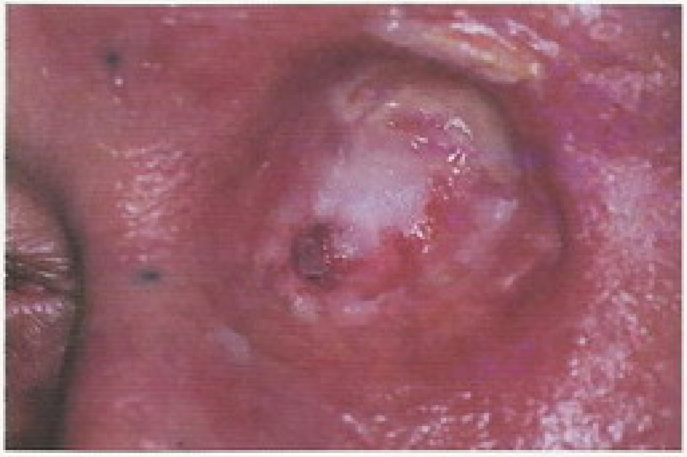
Artificial eye



Artificial eye (no blood vessels)



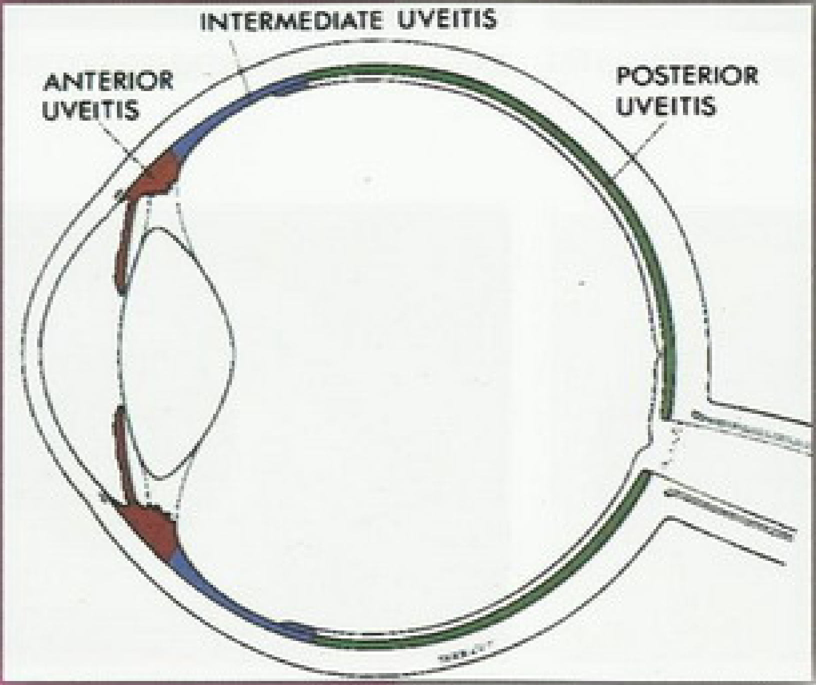
Eviscerated eye

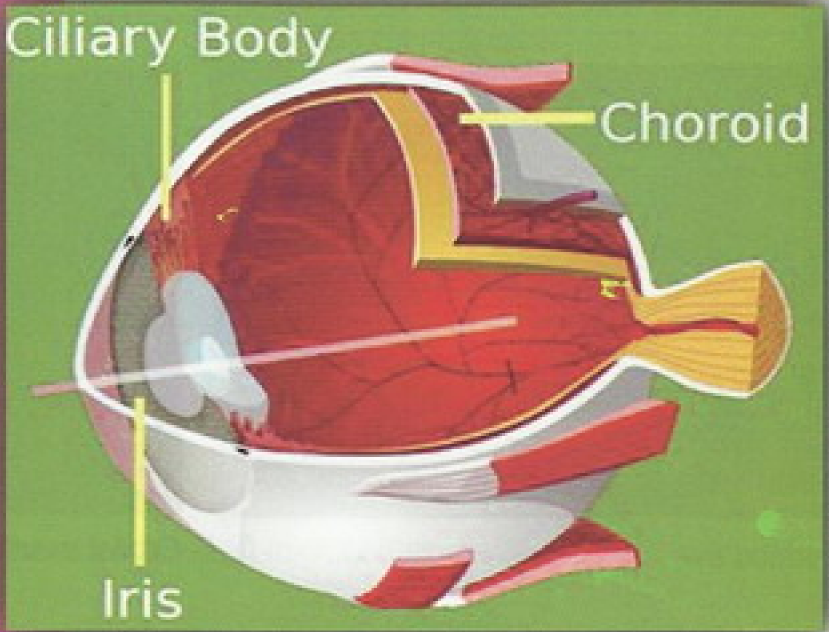


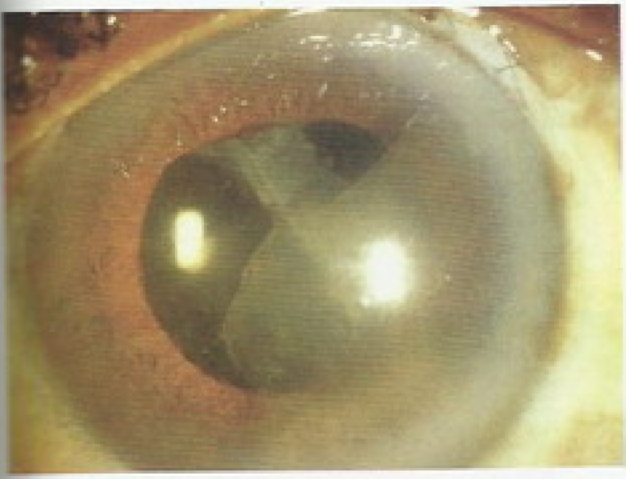
Orbital exentration

Chapter 7

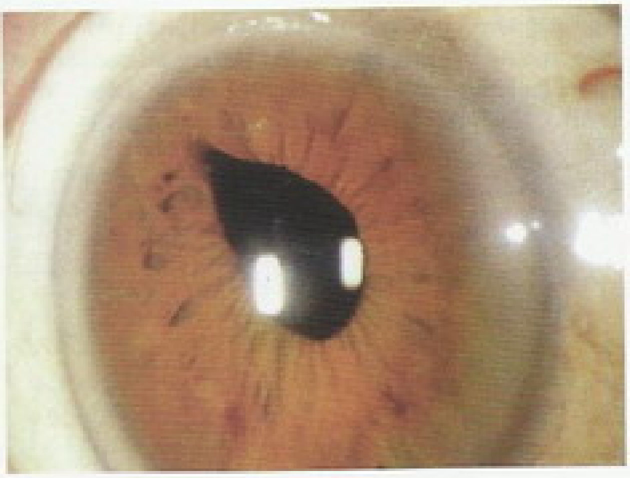
Disorders of Uveal tract


INTERMEDIATE UVEITIS
ANTERIOR UVEITIS
POSTERIOR UVEITIS

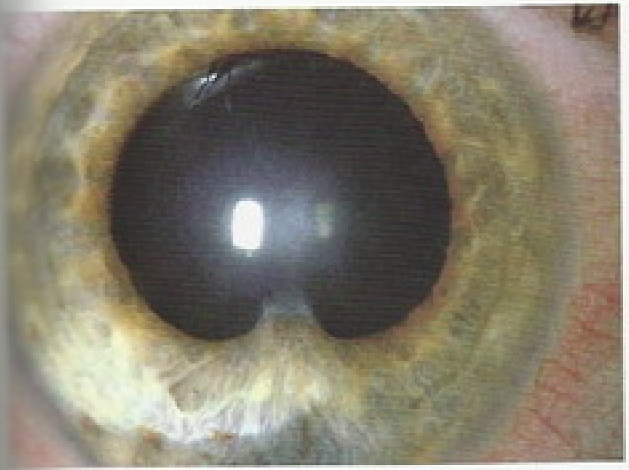

Ciliary Body
Choroid
Iris



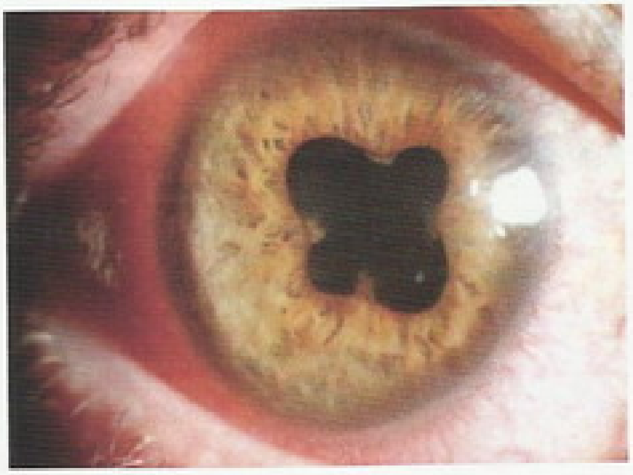
muddy iris (uveitits)



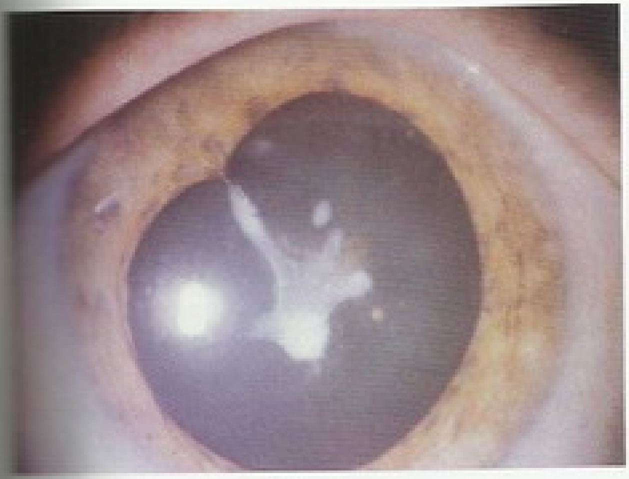
Pear shaped pupil (posterior synechia)



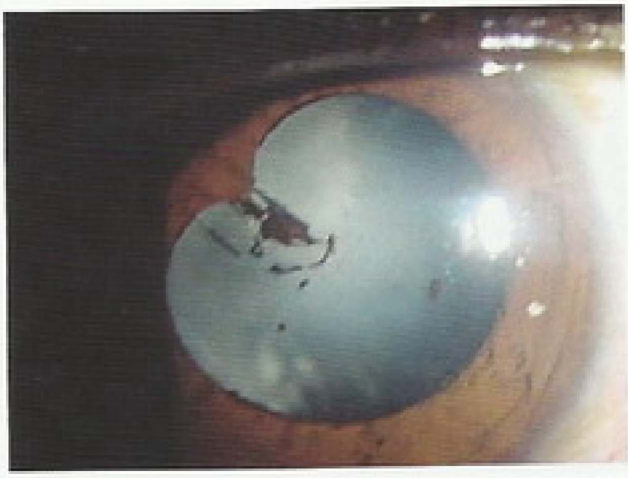
Posterior synechia (adhesions between the iris & lens)



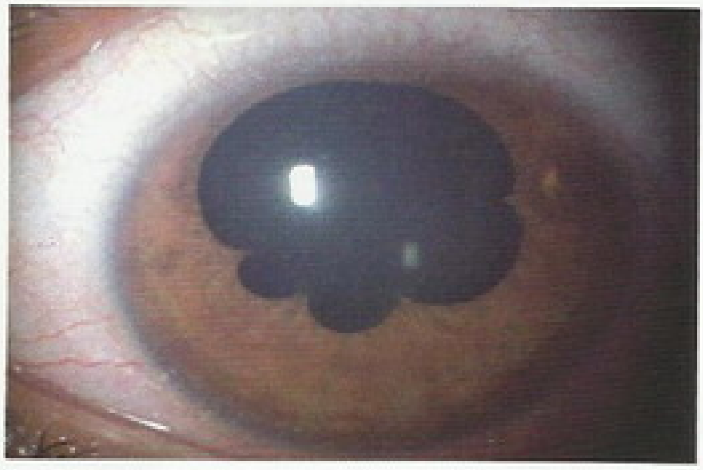
Festooned pupil (posterior synechia)



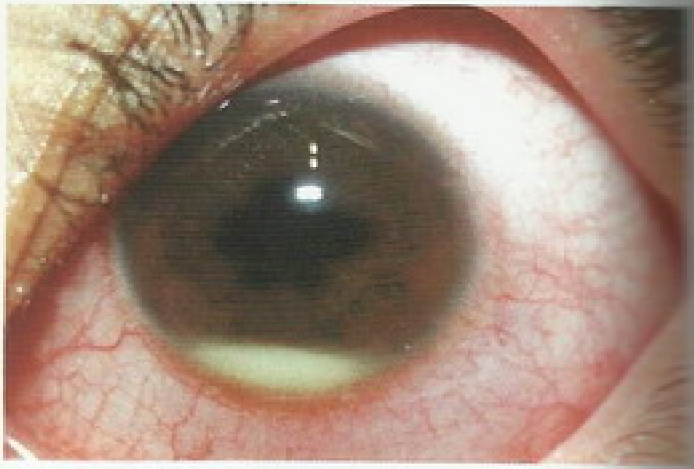
Posterior synechia with cataract



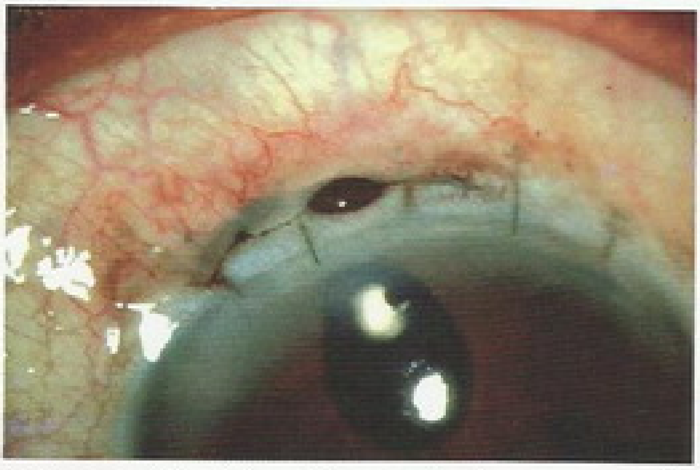
Posterior synechia with cataract



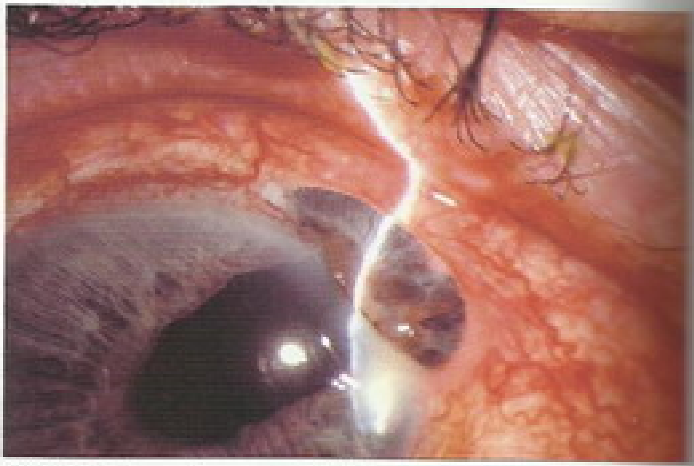
Festooned pupil



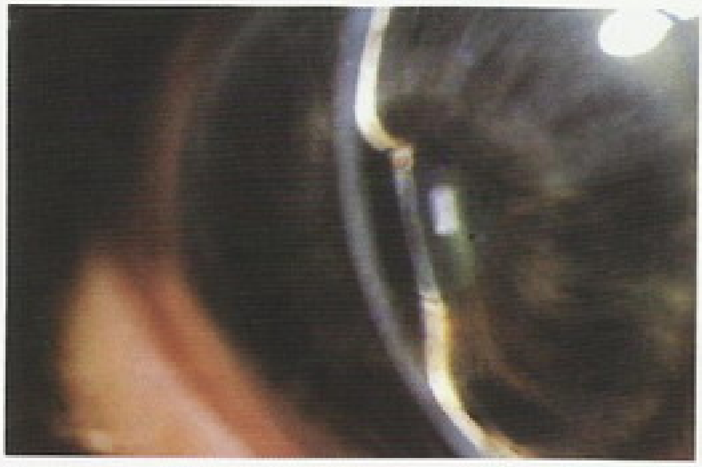
Festooned pupil with hypopyon



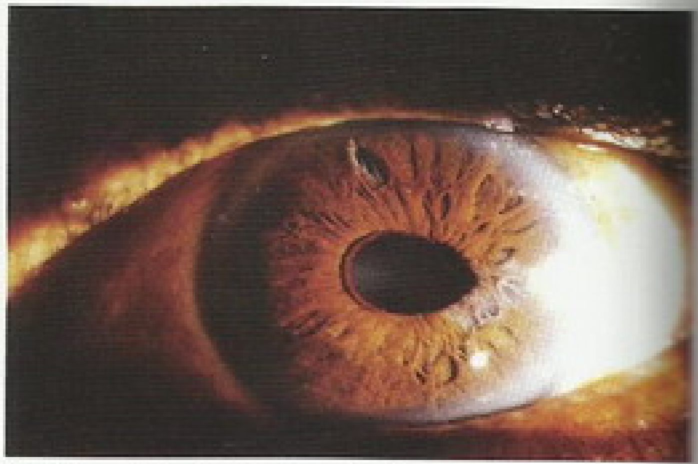
Post-operative Iris prolapse with drawn up pupil



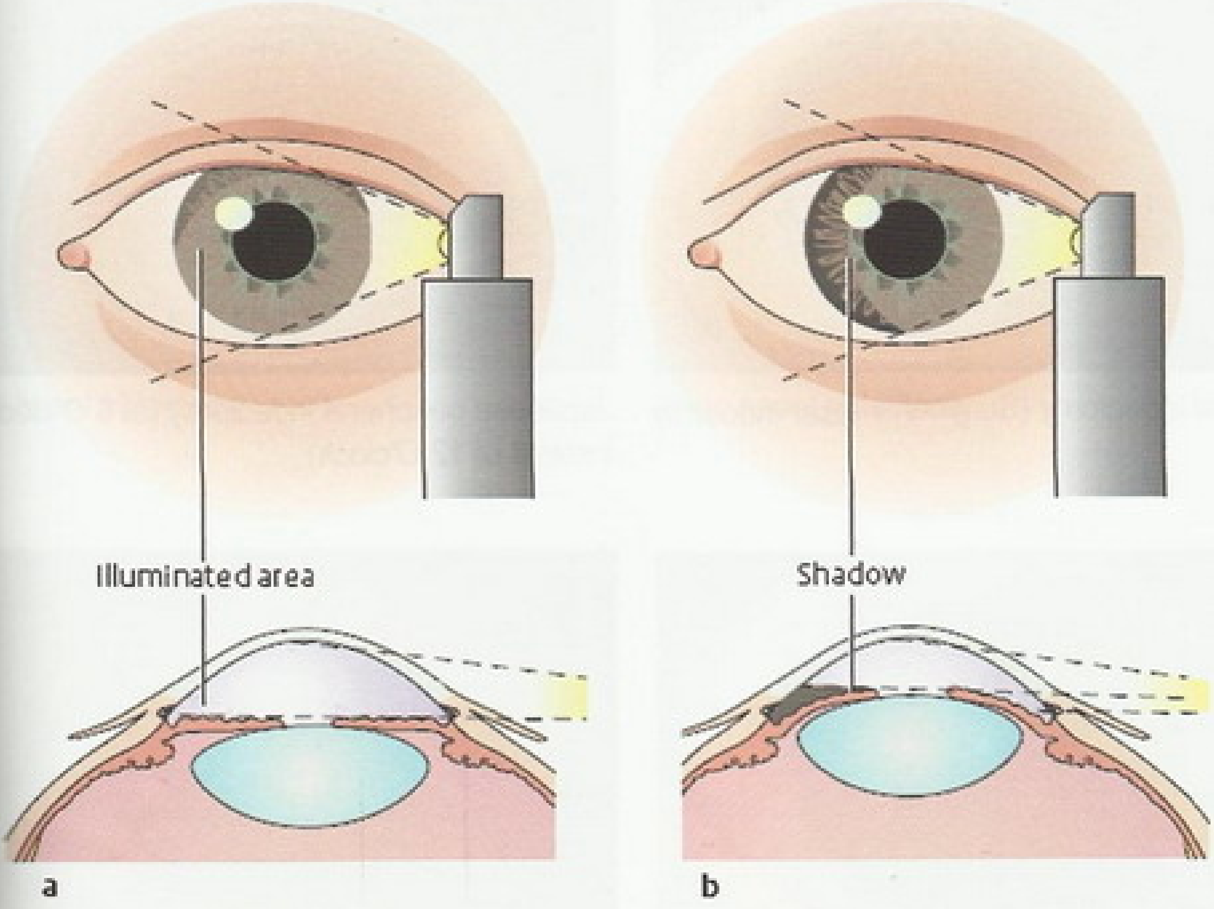
Iris& C.B. prolapse with drawn up pupil (after perforating corneal trauma)



Iris bombe & a very shallow A.C

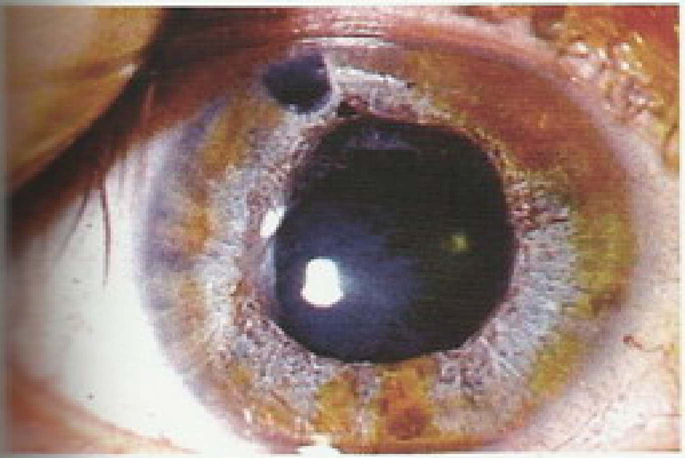


Eclipse sign (note the shadow on the nasal par of the iris)

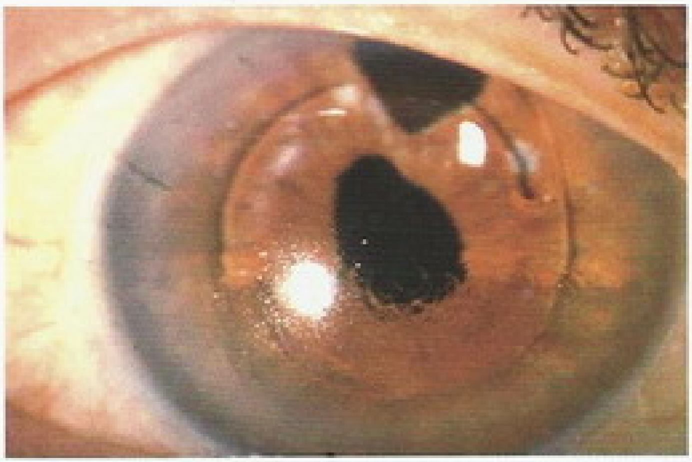

Illuminated area
Shadow
a
b

Eclipse sign

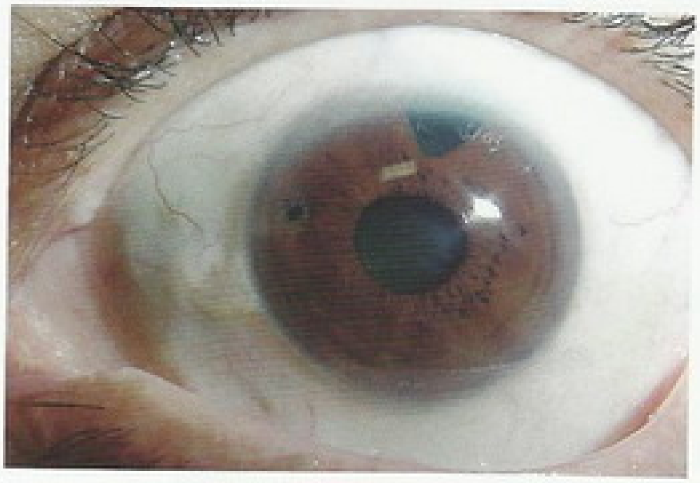
(a) Normal AC depth
(b) Shollow AC (large shaddow is visible on the iris)



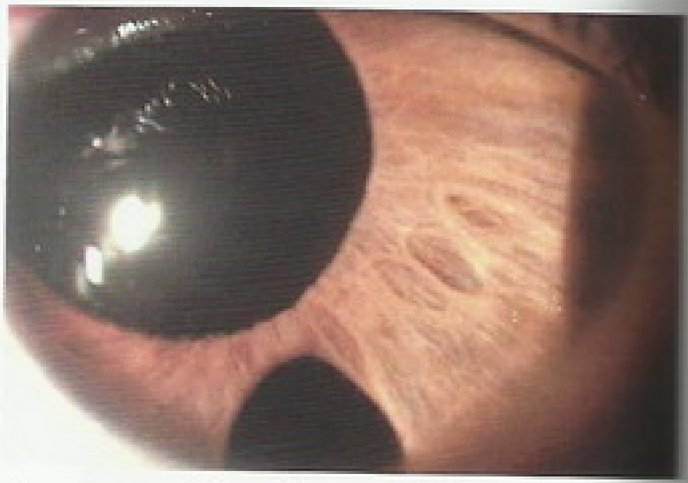
Peripheral iridectomy, patches of iris atrophy after acute congestive glaucoma attack



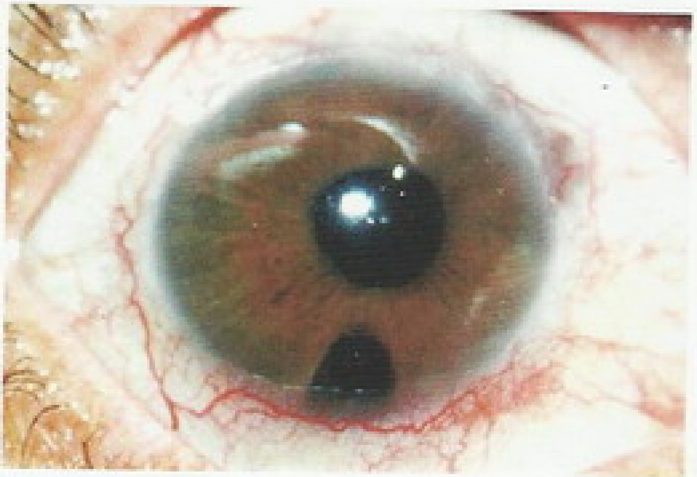
Peripheral iridectomy with A.C IOL



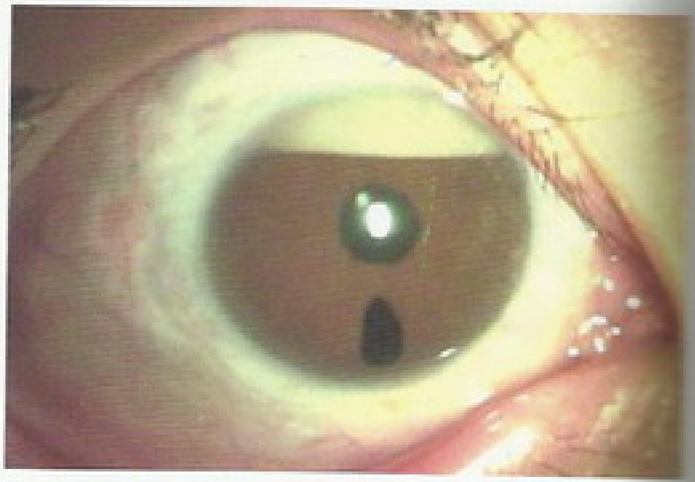
Peripheral iridectomy (Surgical) + laser iridotomy



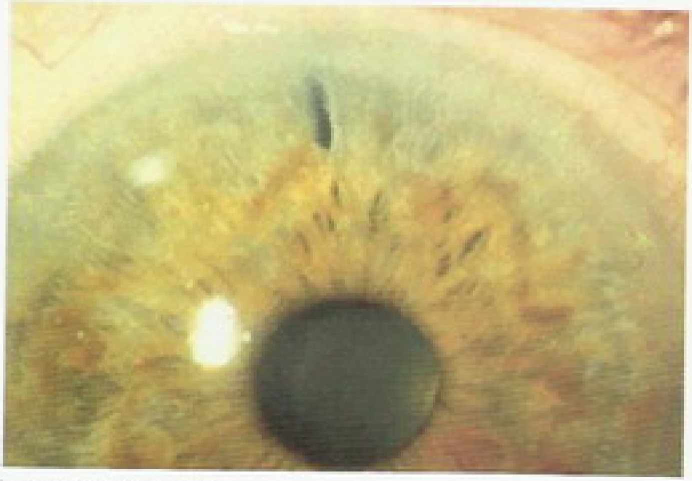
Japanese peripheral iridectomy (at 6 O'clock instead of 12 O'clock)



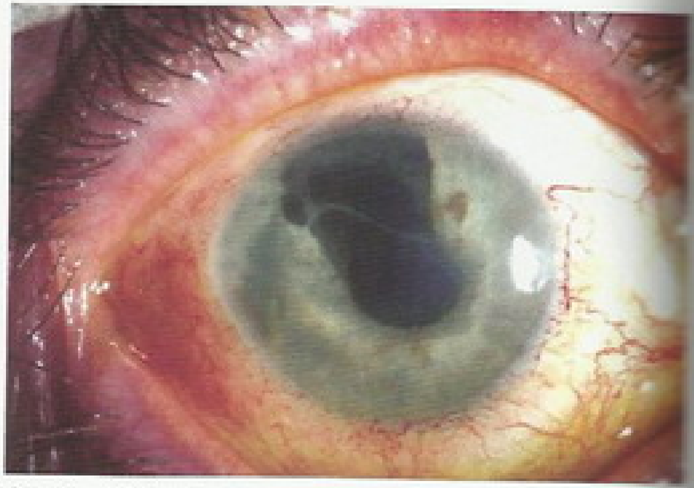
Japanese iridectomy at 6 O`clock



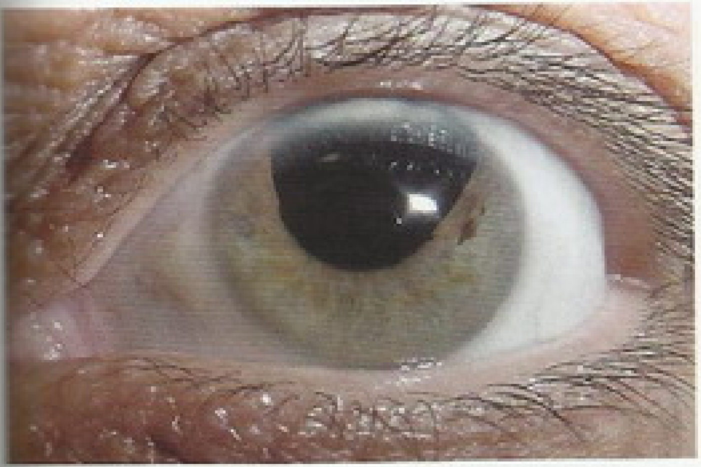
Japanese iridectomy
+ inverted hypopyon(emulsified silicon oil)



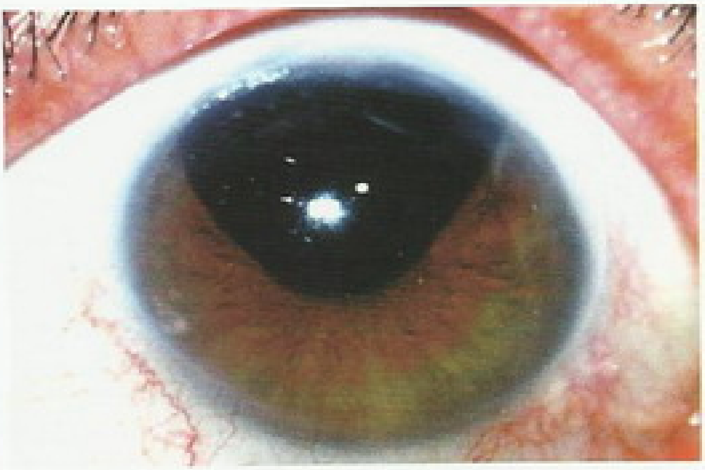
Laser iridotomy



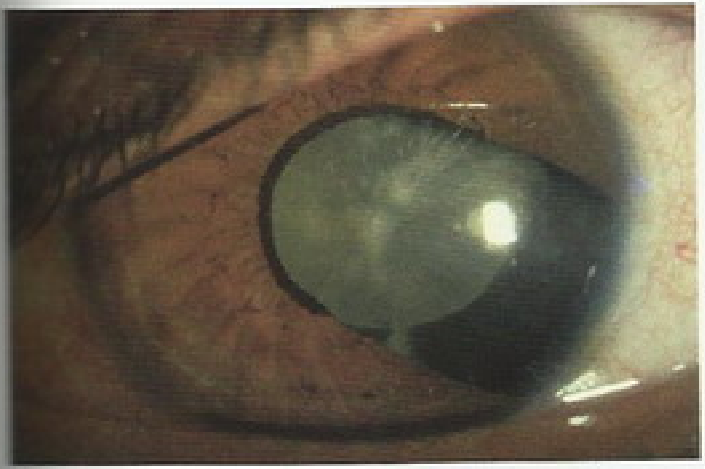
Sector iridectomy



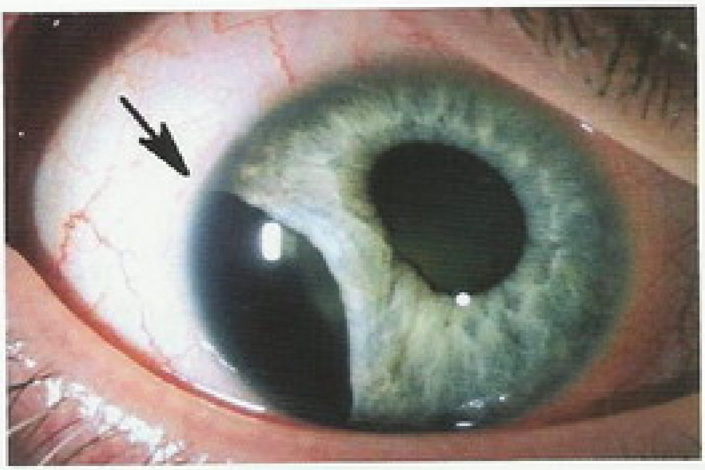
Wide-basal iridectomy



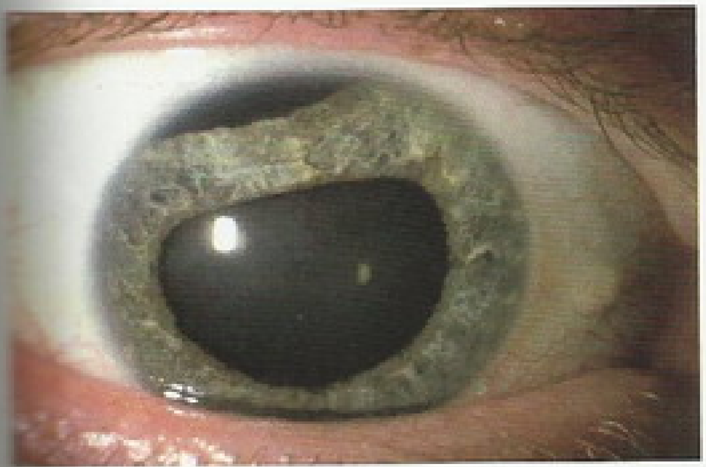
Wide-basal iridectomy



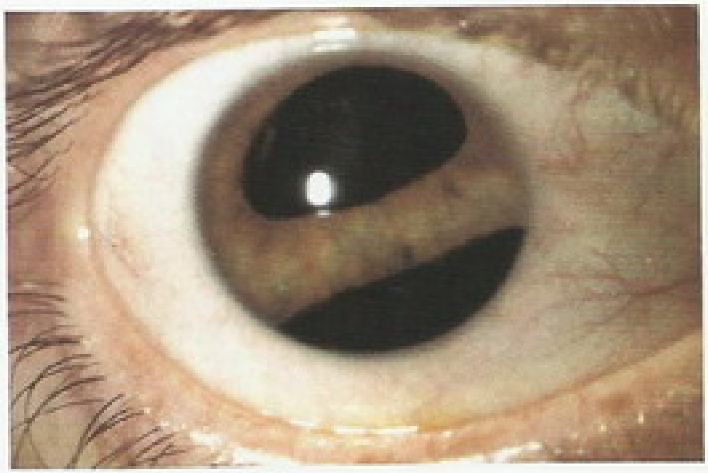
Visual iridectomy (Down & in)with cataract



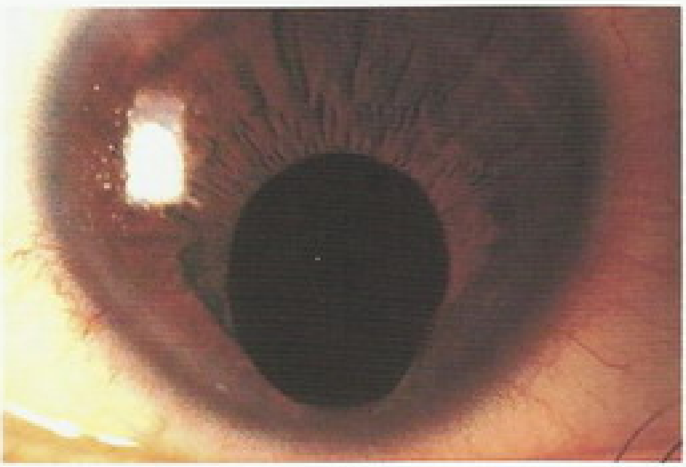
Iridodialysis (D-shaped pupil)



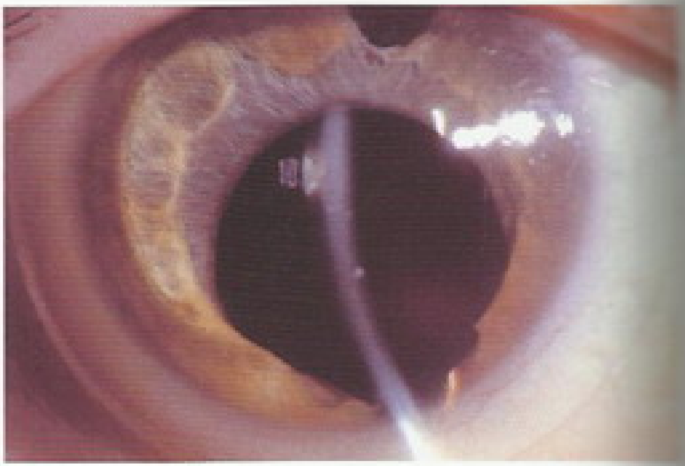
ridodialysis



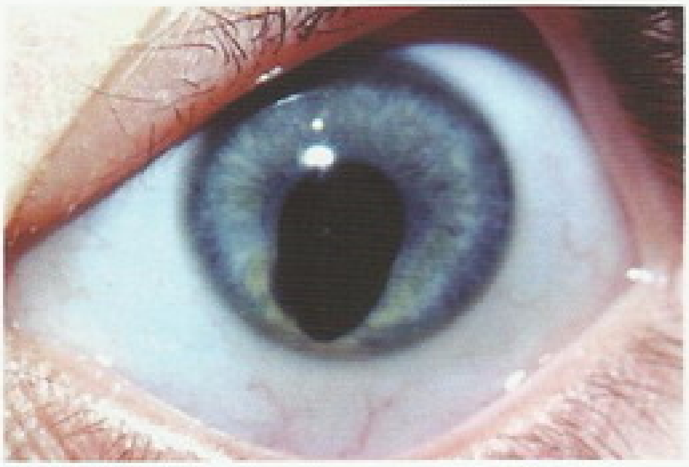
Inferior Iridodialysis



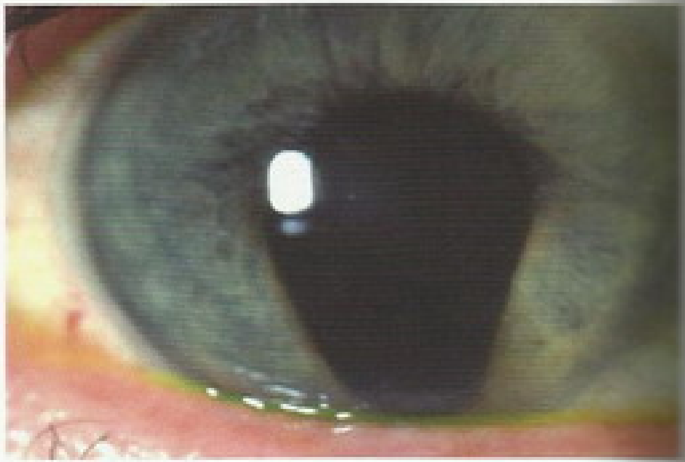
Iris coloboma



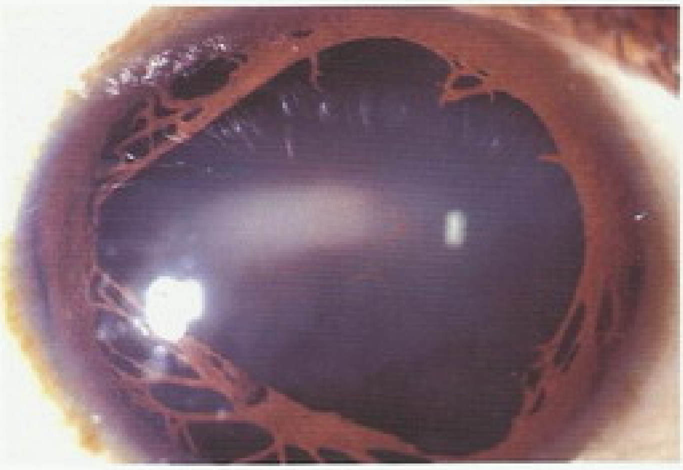
Iris coloboma + peripheral iridectomy



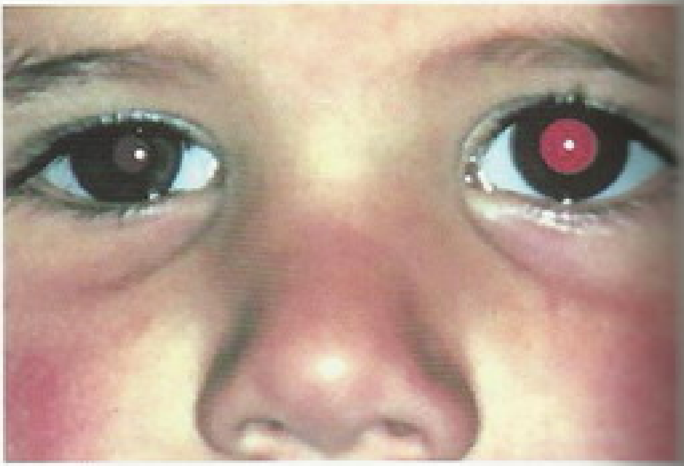
Iris coloboma



Iris coloboma

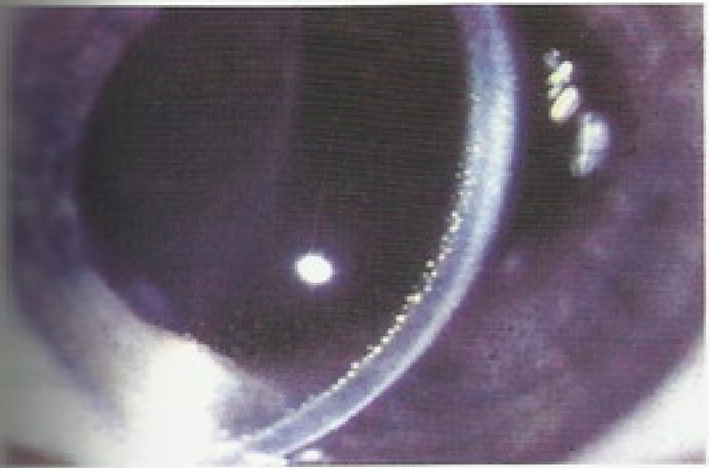


Congenital aniridia (congenital absence of iris, never to be complete)

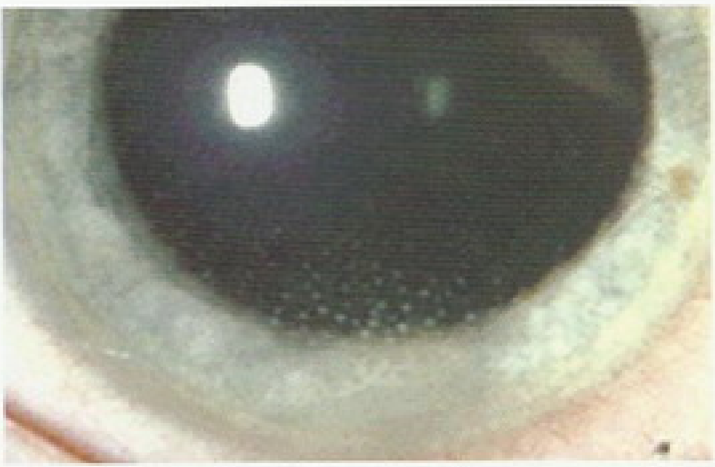


Anisocoria (unequal size pupil)

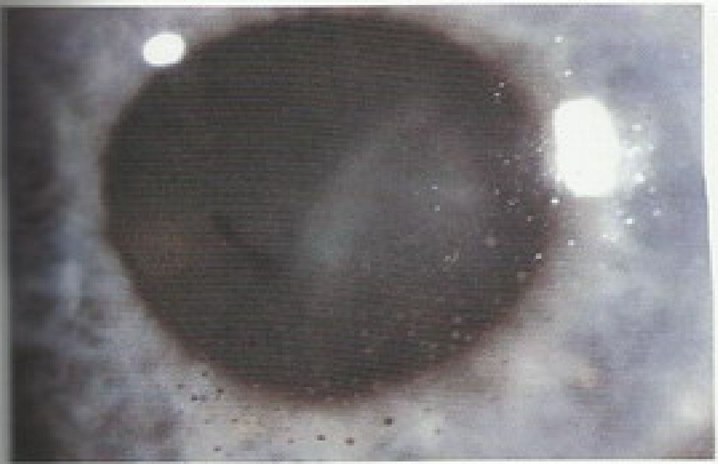
WhiteKnightLove



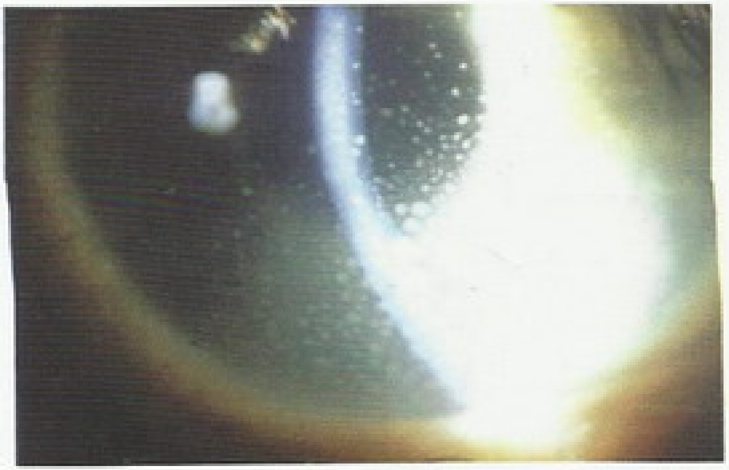
eratic precipitates (recent type in acute iridocyclitis)



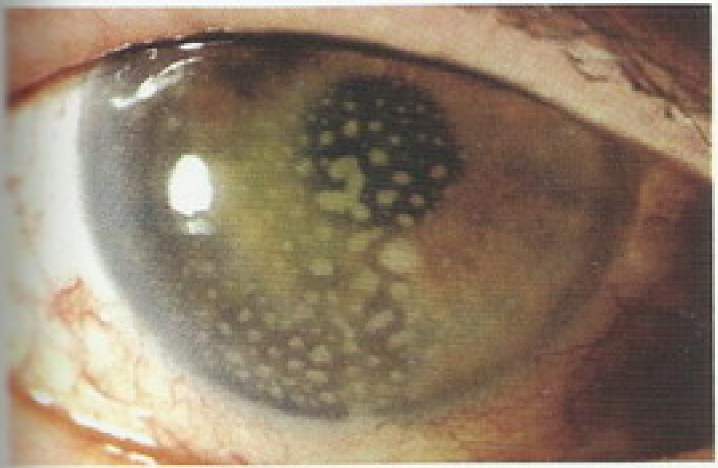
KPs (recent type)



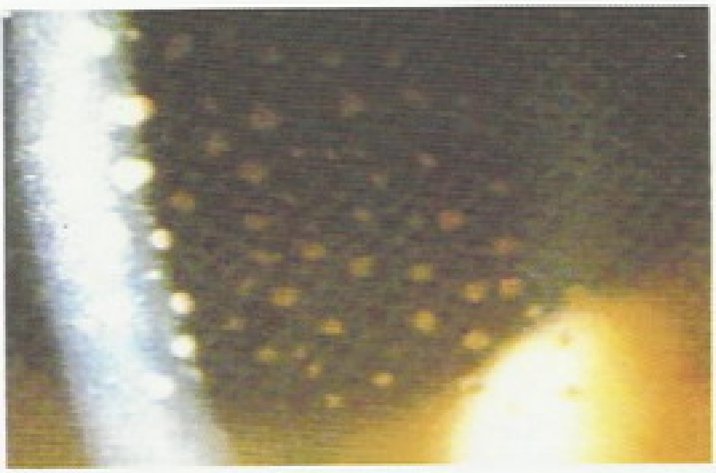
Old keratic pericipitates= old Kps(pigmented)



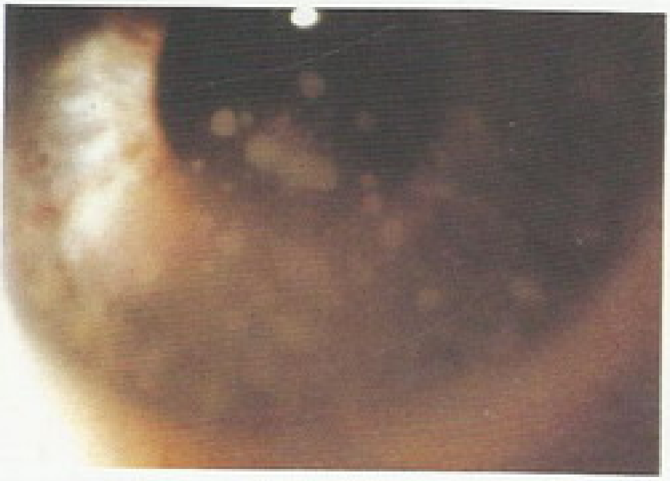
KPs (mutton fat type in granulomatous iridocyclitis)



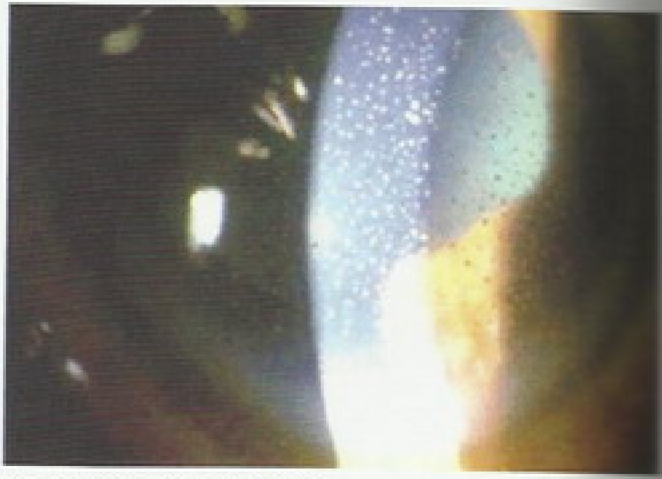
KPs (mutton fat type in granulomatous iridocyclitis)



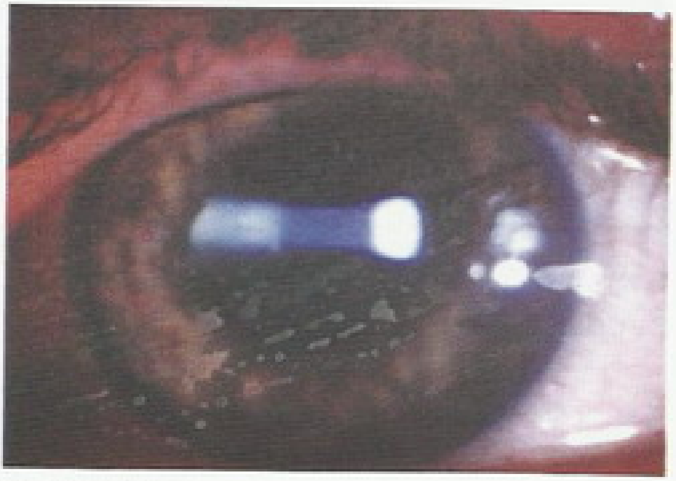
Mutton fat Kps in case of granulomatous uveitis (large& yellowish)



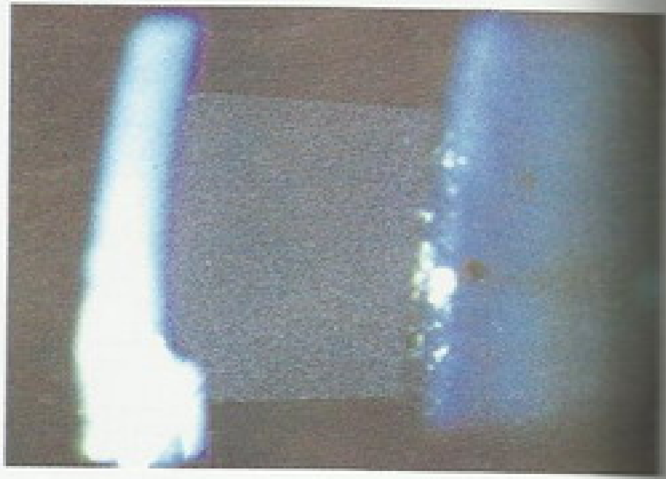
Mutton fat Kps



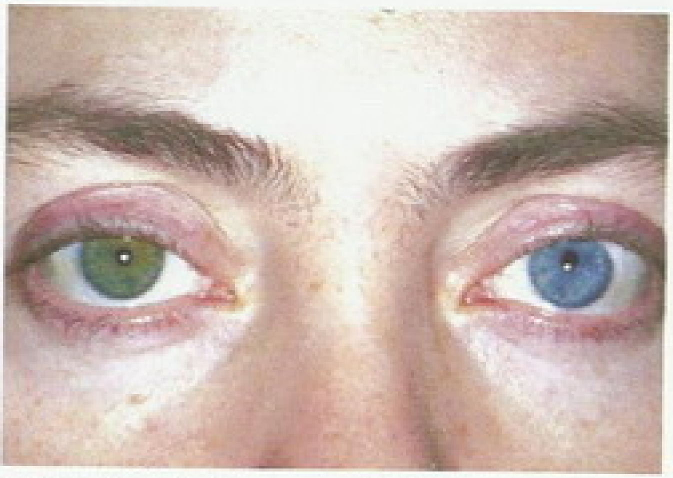
KPs with aqueous flare



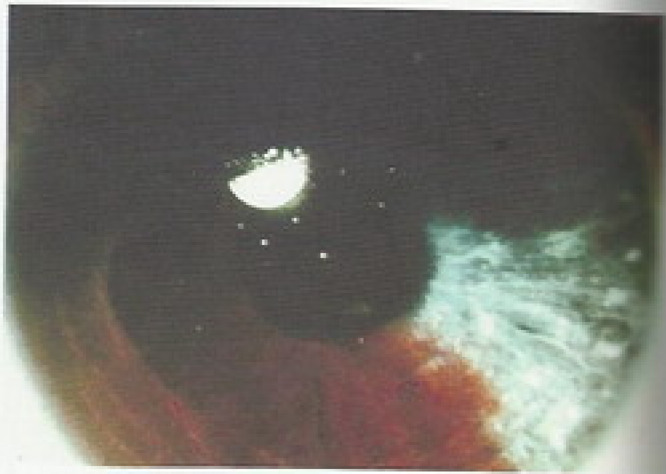
Aqueous flare



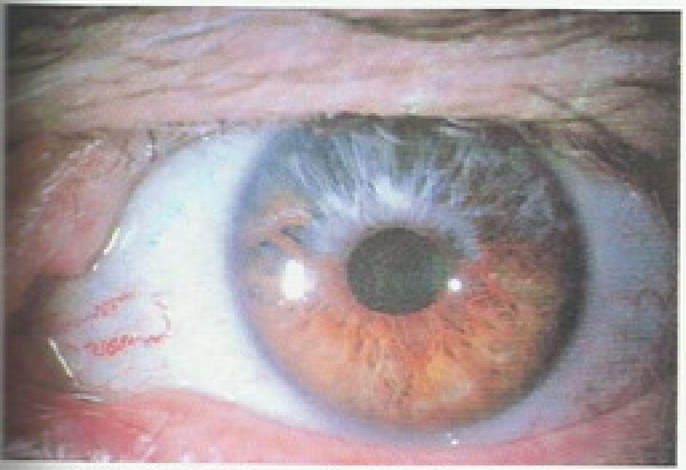
Aquous flare



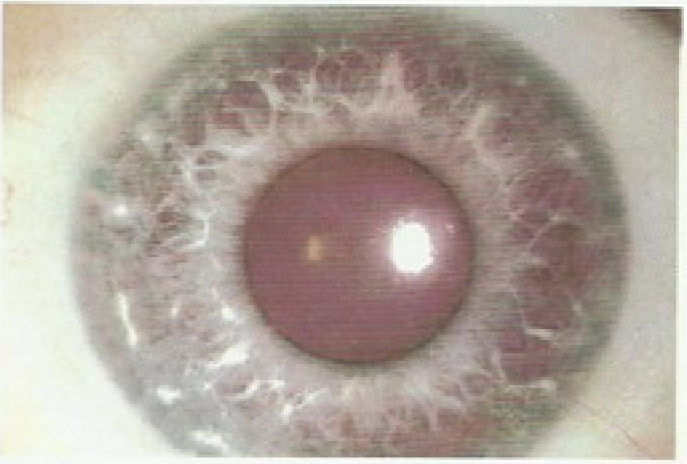
Heterochromia irides : each iris hase a different colour.



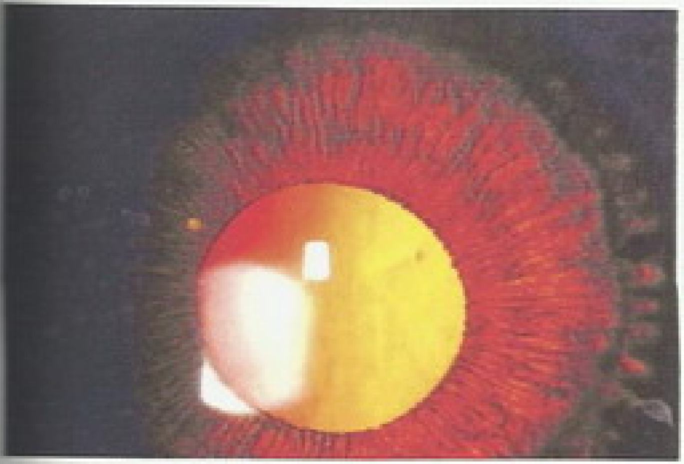
Heterochromia iridum : the iris has parts of a different colors



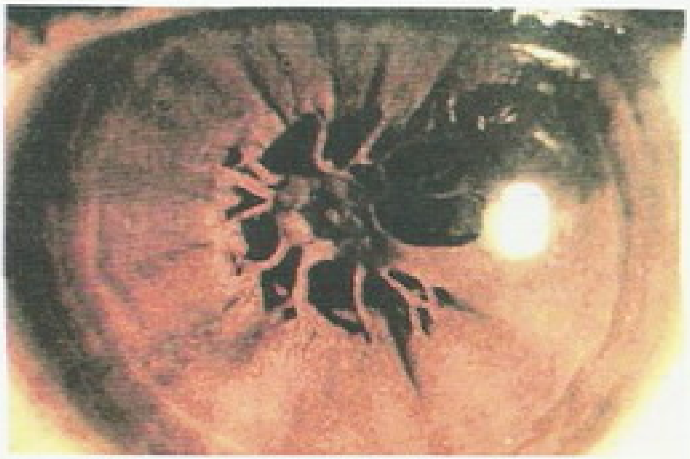
Heterochromia iridum : the iris has parts of a different colors



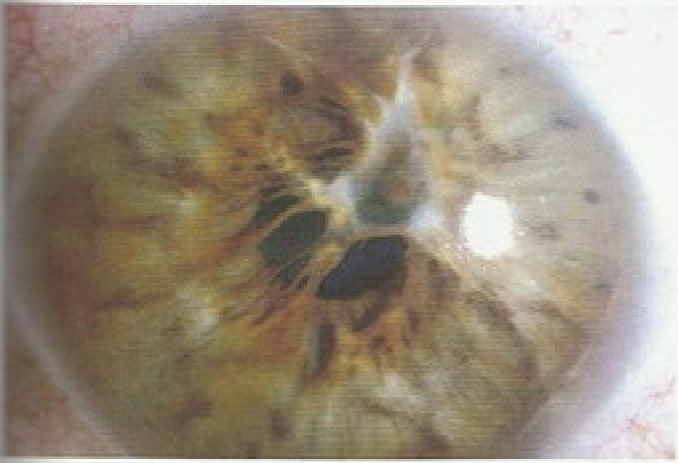
Albinism (note the reddish iris)



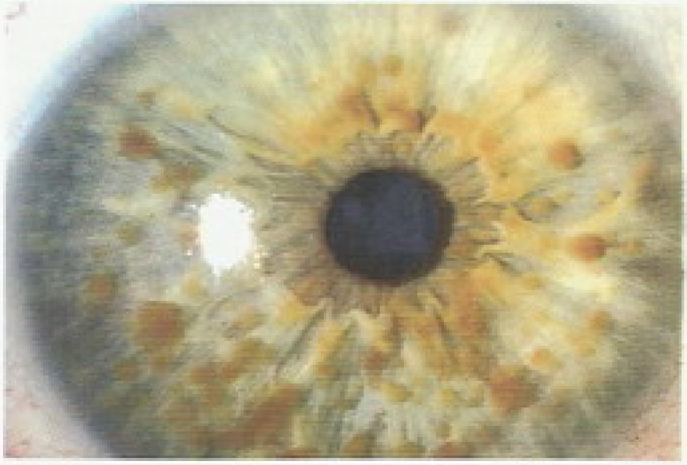
Albinism (note the reddish iris)



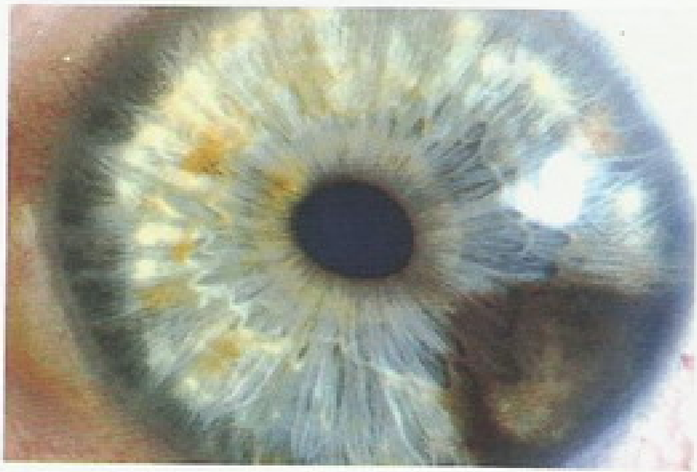
Persistent pupillary membrane



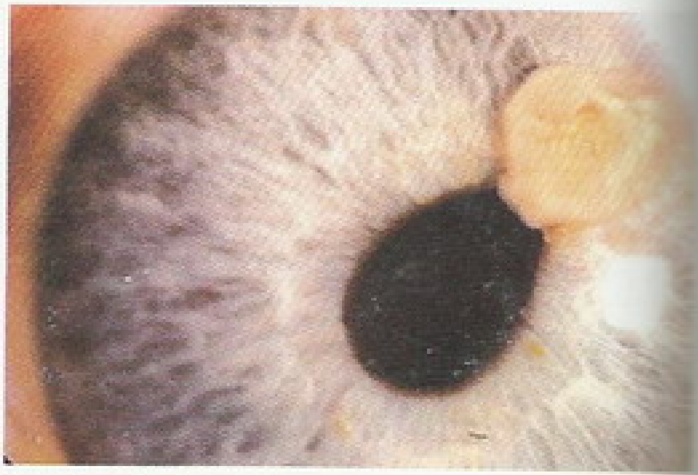
Persistent pupillary membrane



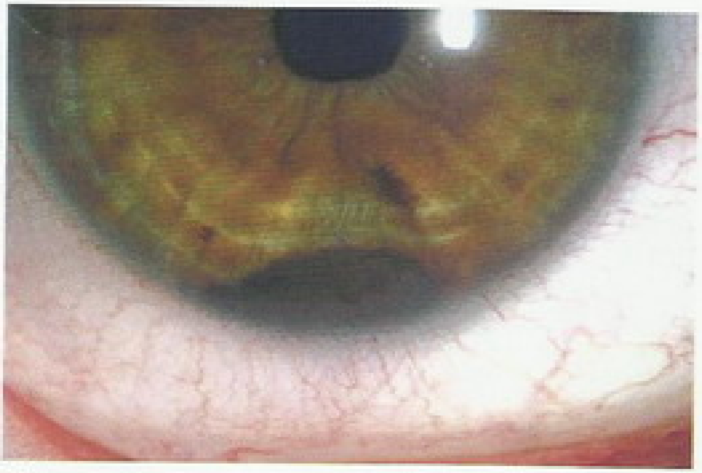
Multiple naevi of the iris



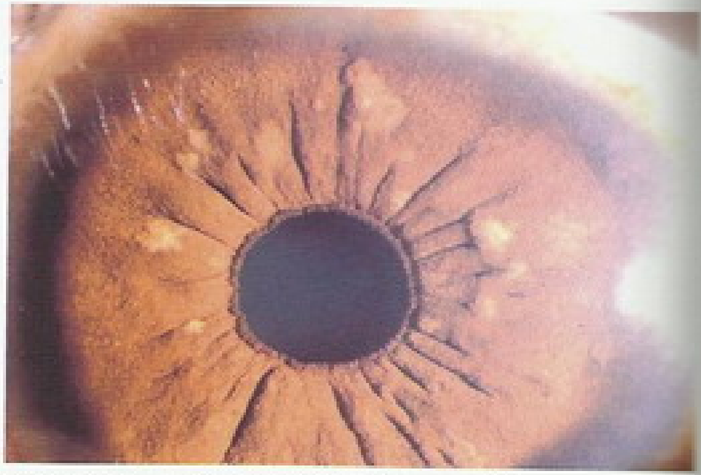
malignant melanoma of the iris (note irregular pupil)



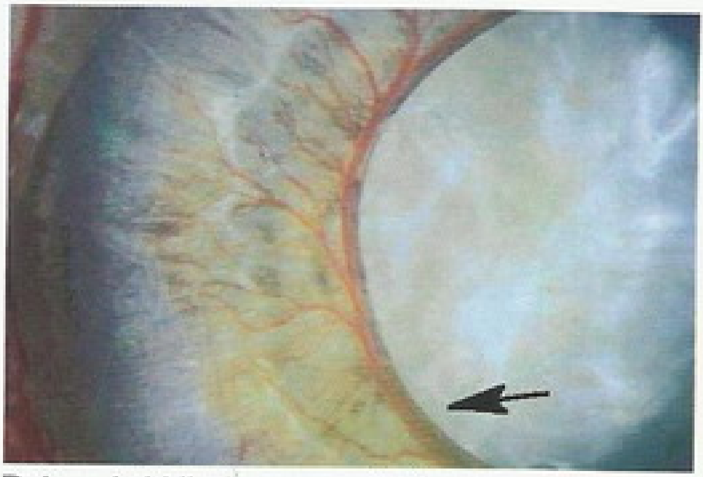
Amelanotic iris melanoma



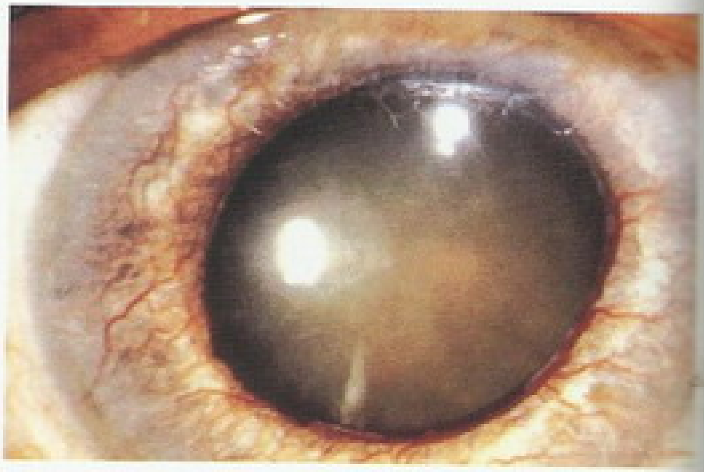
Malignant melanoma of iris
(DD from iridectomy)



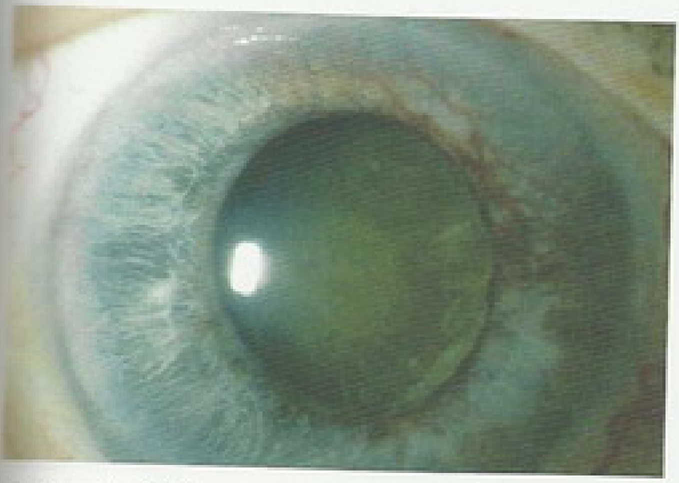
Lisch nodules (one of the iris naevi)



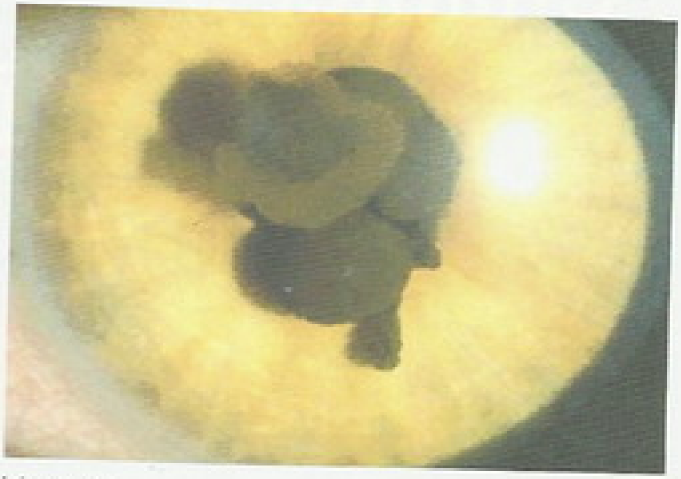
Rubeosis iridis (new vascularization of the iris)



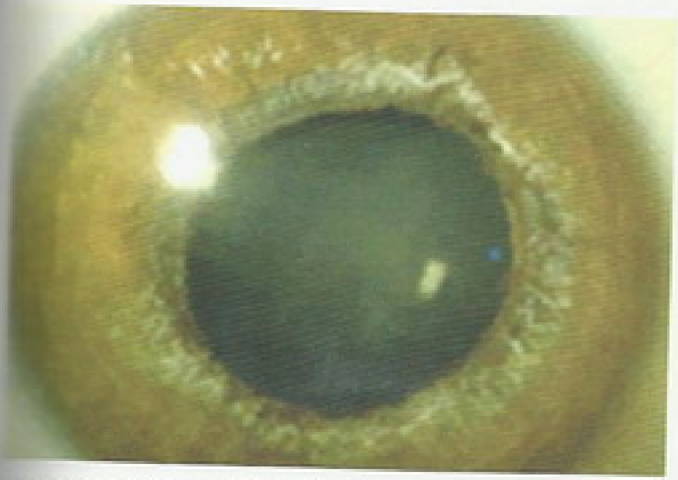
Rubeosis iridis



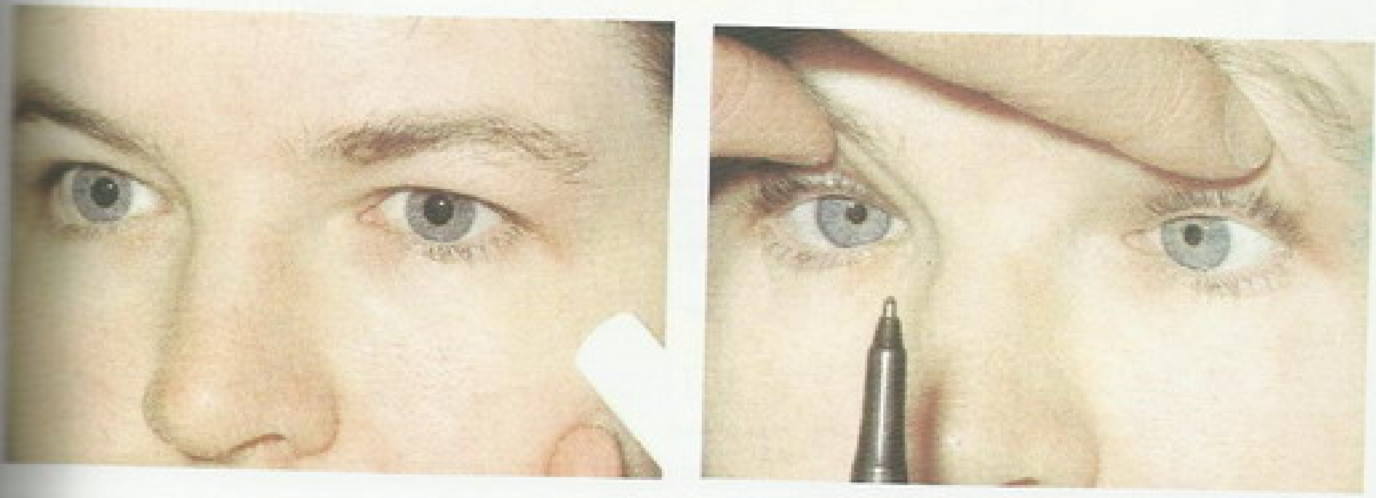
Rubeosis iridis



Iris cyst



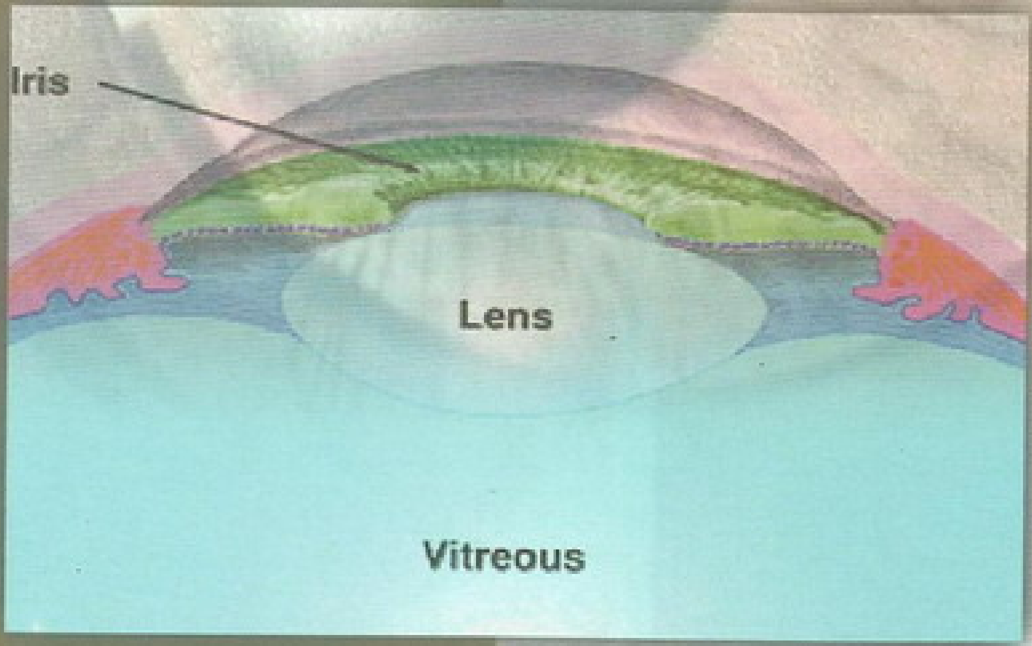
White patches of iris atrophy

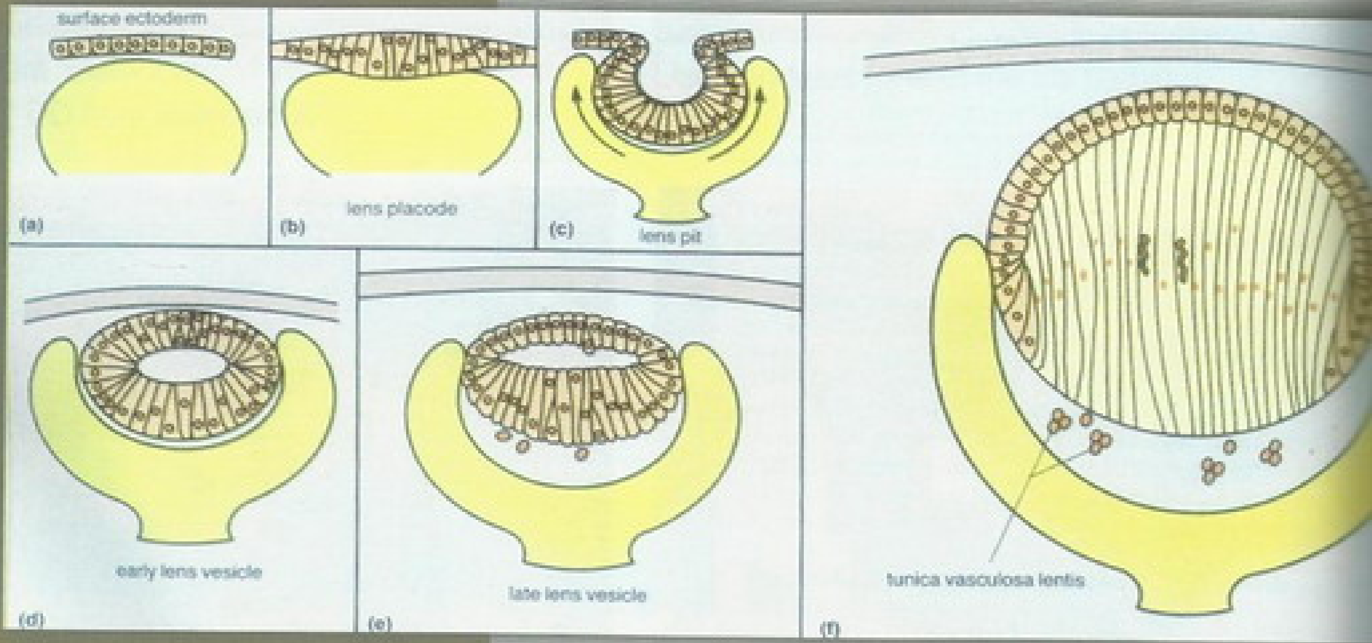


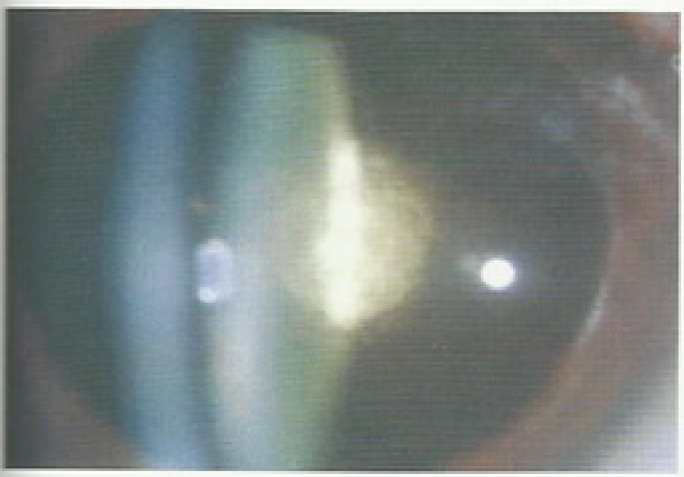
Light near dissociation
no miosis with light, intact miosis with near

Chapter 8

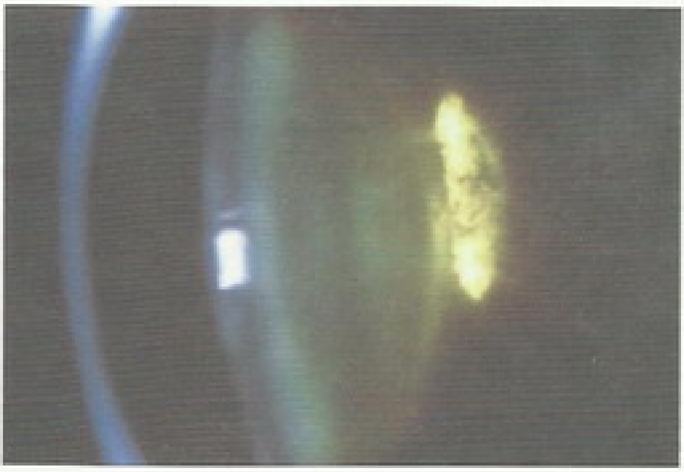
Disorders of the Lens


Iris
Lens
Vitreous

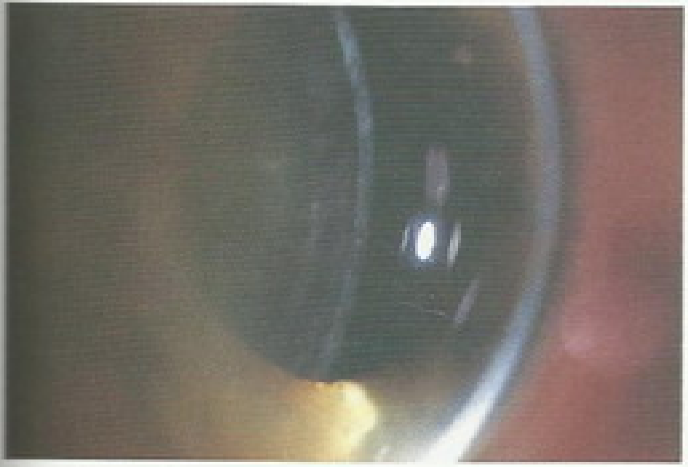

surface ectoderm
(a)
lens placode
(b)
lens pit
(c)
early lens vesicle
(d)
late lens vesicle
(e)
tunica vasculosa lentis
(f)



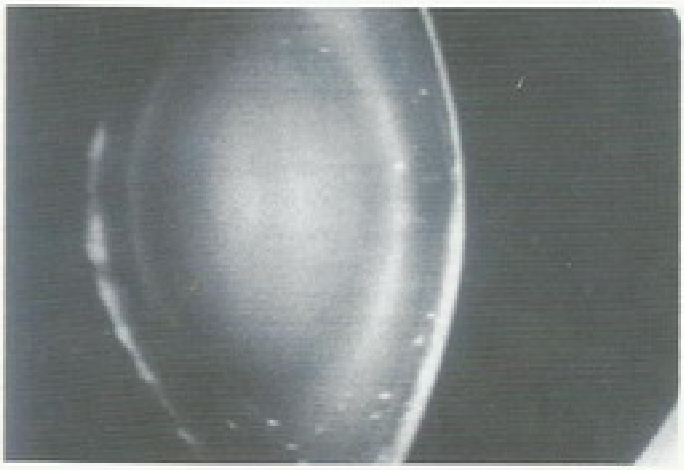
Posterior subcapsular cataract (slit view)



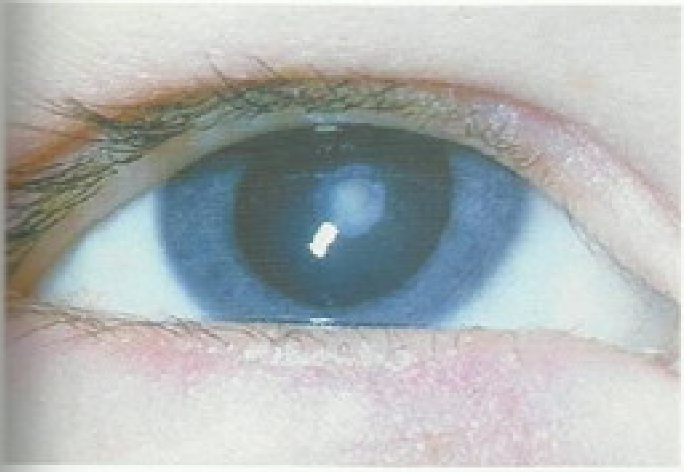
Posterior subcapsular cataract (slit view)



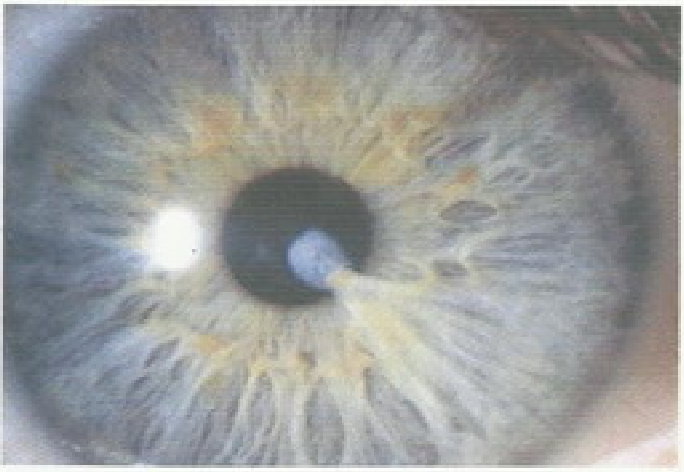
Anterior subcapsular cataract (slit view)



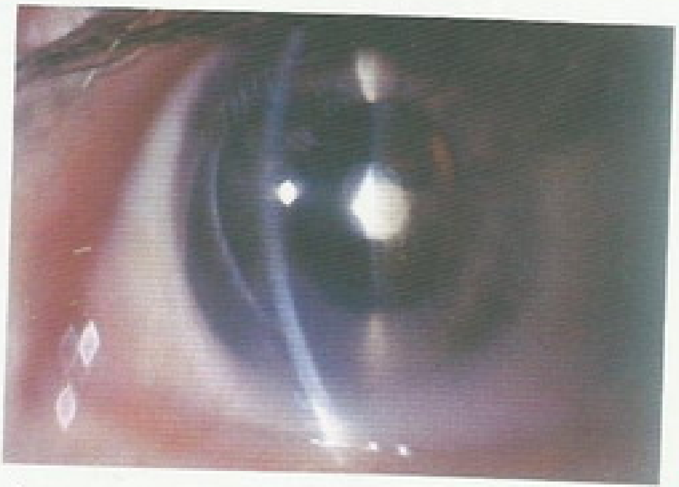
Posterior subcapsular cataract (using UBM = ultrasound biomicroscopy)



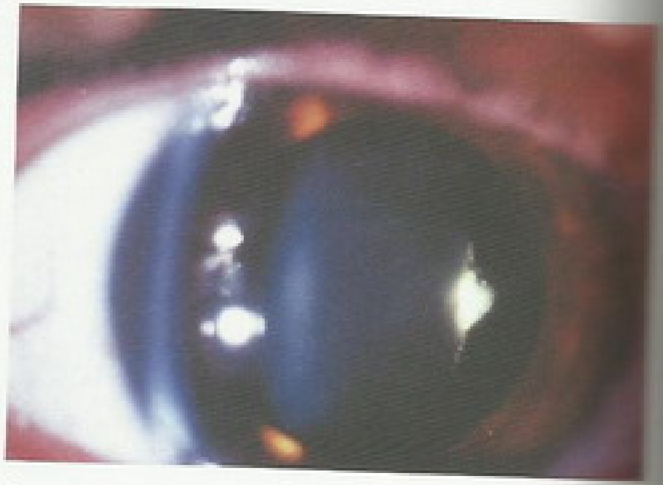
Congenital anterior polar cataract



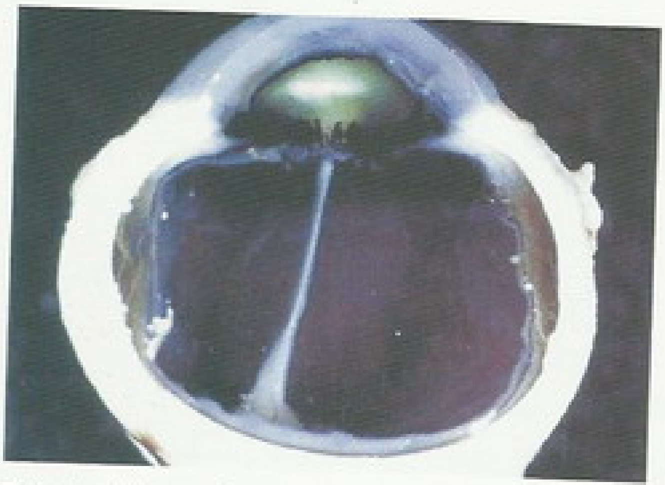
Congenital anterior polar cataract with persistent pupillary membrane



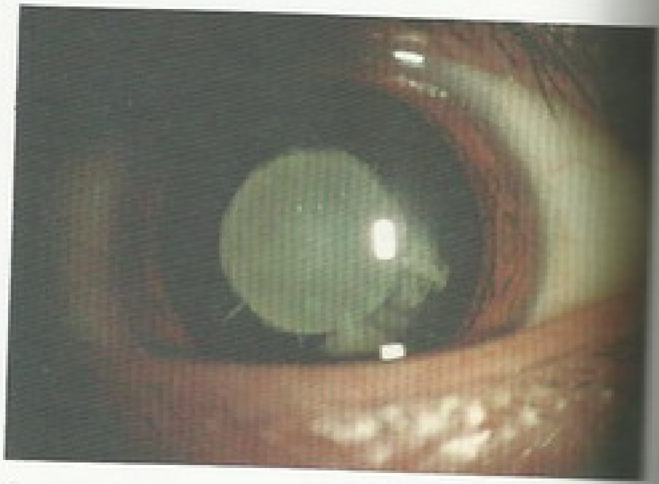
Congenital anterior polar cataract (slit view)



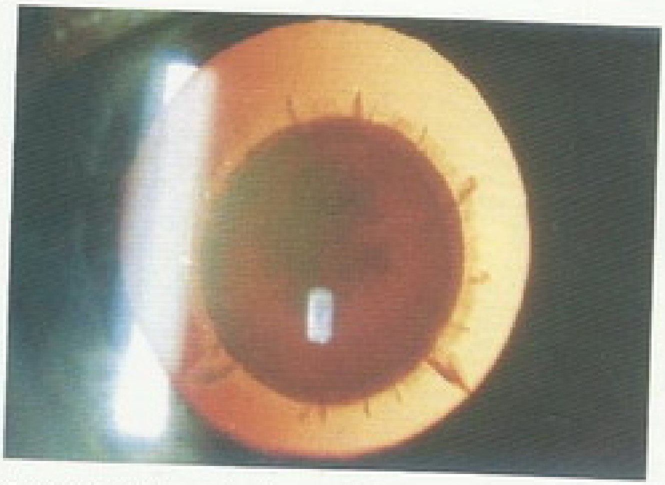
Congenital posterior polar cataract (slit view)



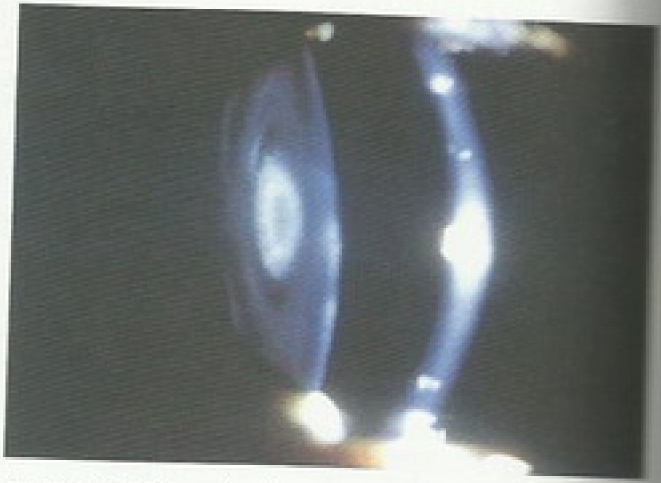
Enucleated eye showing persistent hyaloid artery



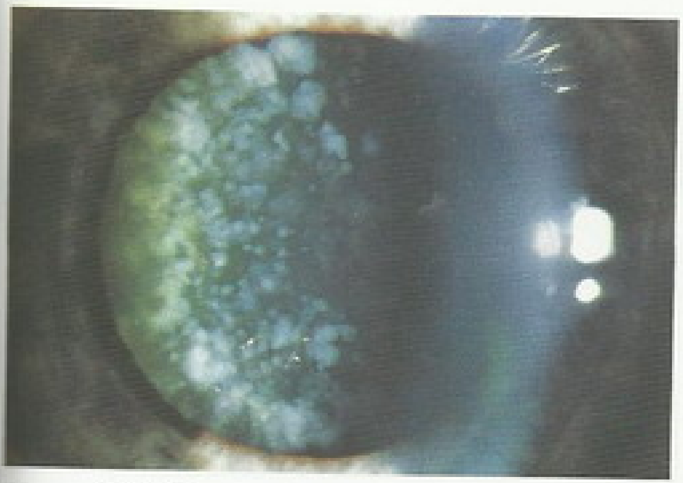
Congenital lamellar (zonular) cataract



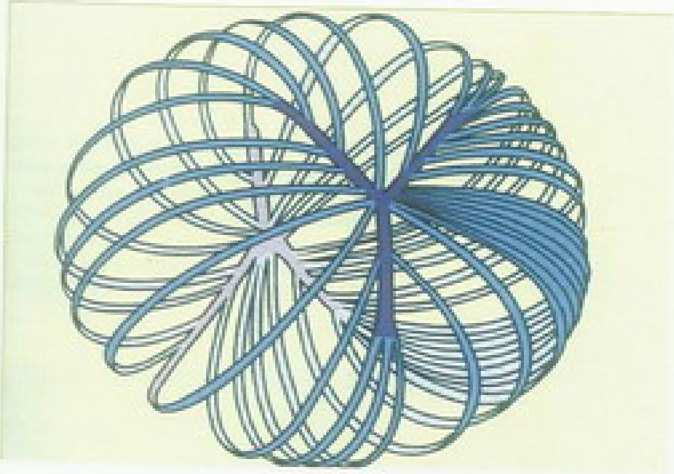
Congenital lamellar (zonular) cataract seen against red reflex



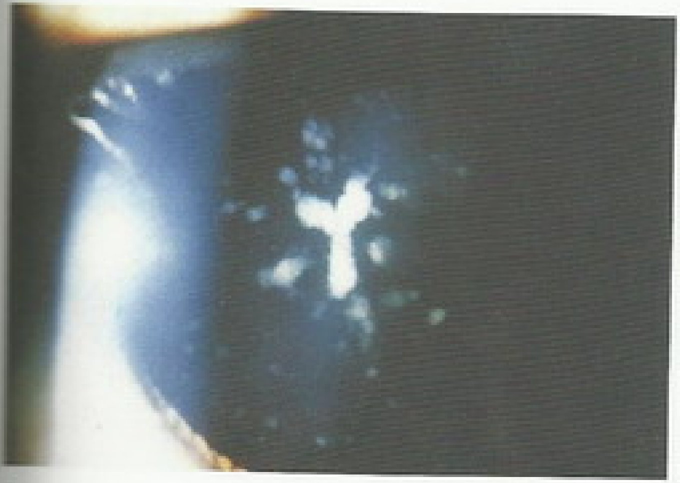
Congenital lamellar (zonular) cataract



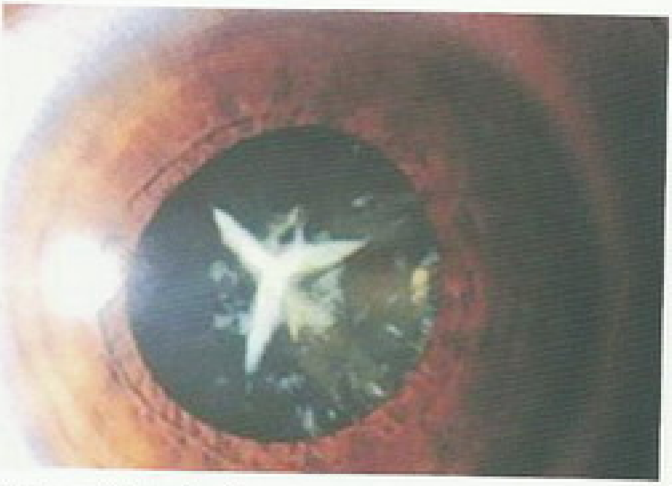
Congenital blue dot (punctate) cataract



Articulations of lens fibers:
- Anterior Y suture is erect
- Posterior Y suture is inverted

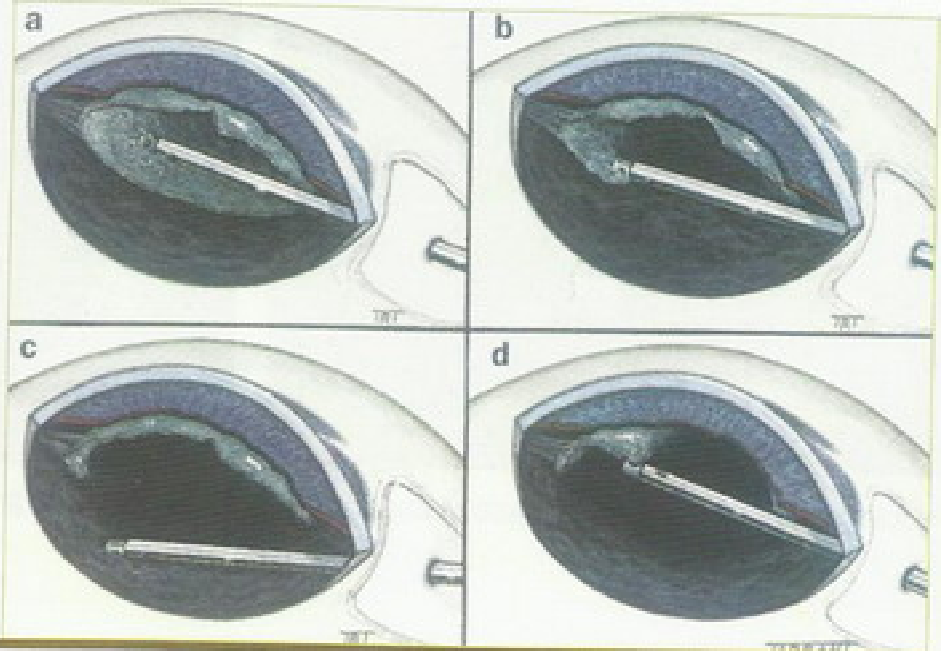


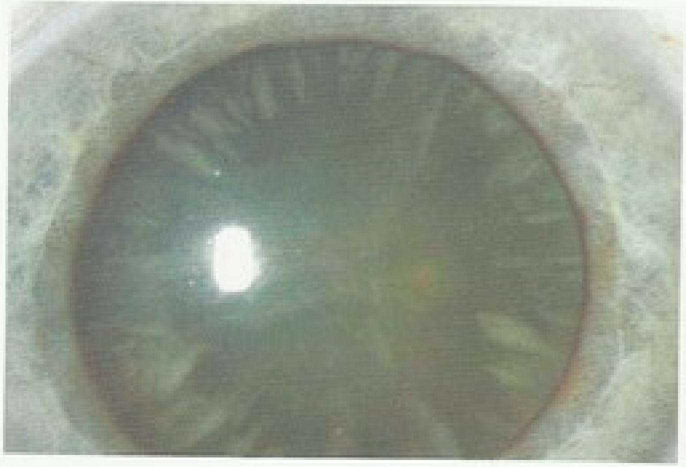
Congenital sutural cataract



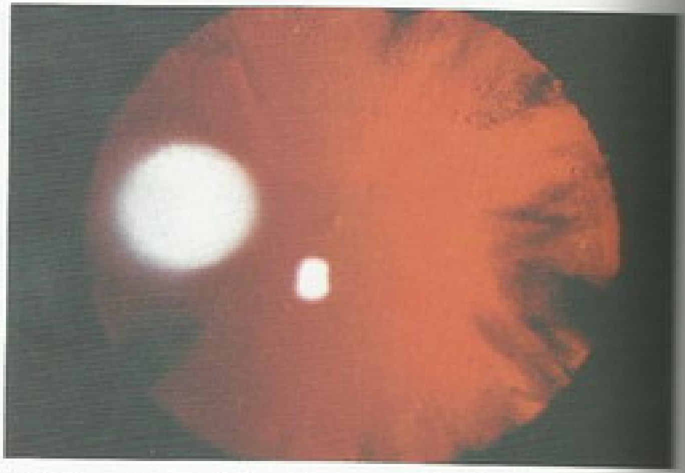
Congenital sutural cataract

Lensectomy operation
for congenital cataract

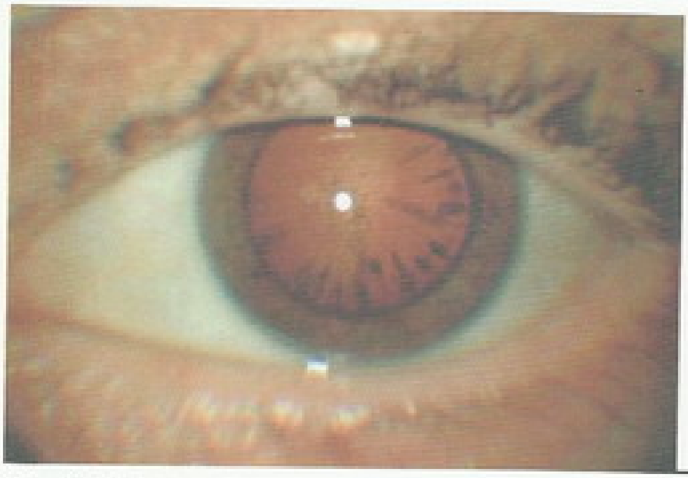




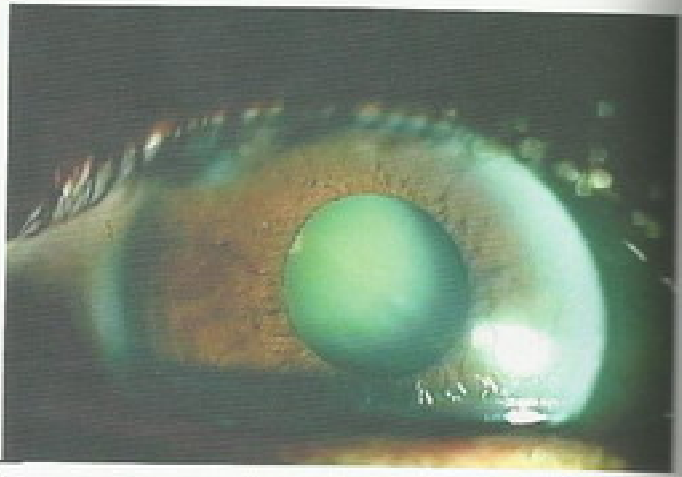
Senile incipient (immature cortical cataract)



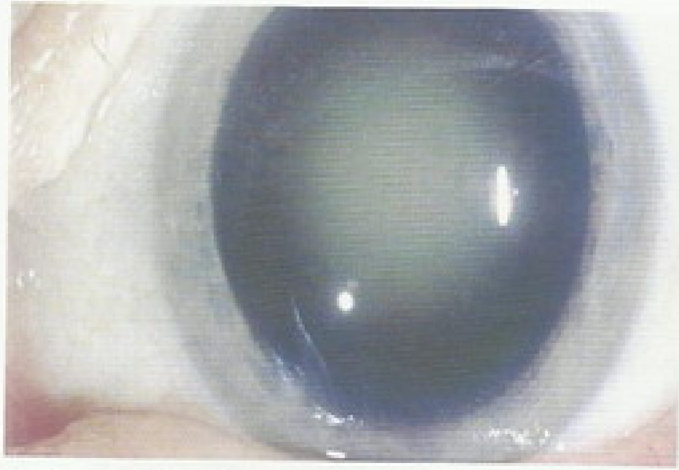
Senile incipient (immature cortical cataract) seen against red reflex



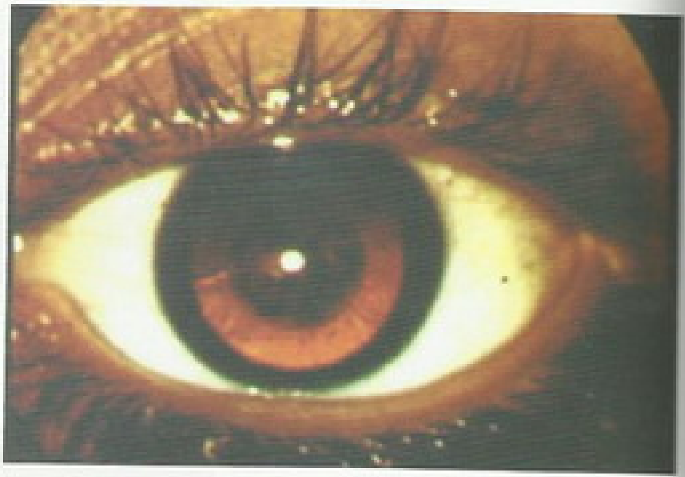
Senile incipient (immature cortical cataract) seen against red reflex



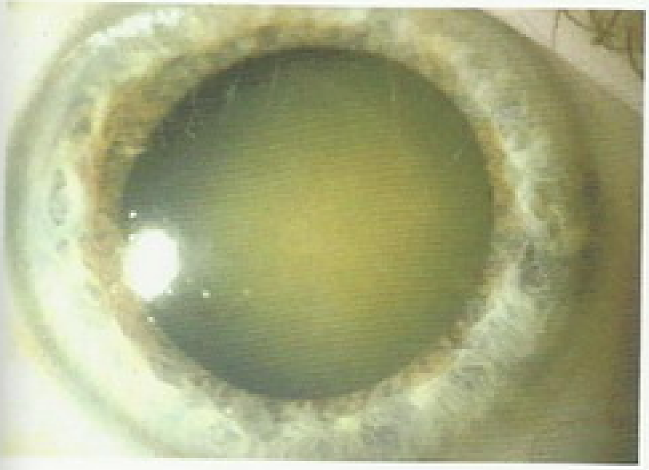
Iris shaddow in immature cataract



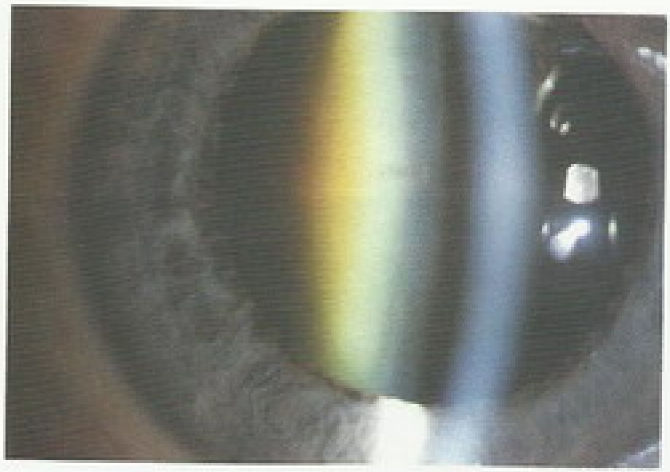
Nuclear cataract



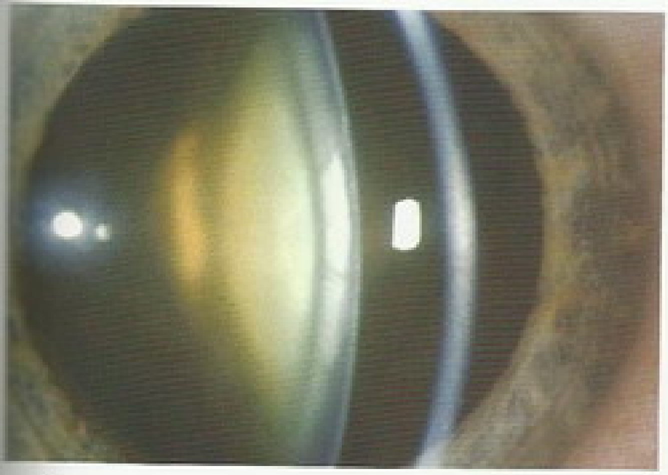
Nuclear cataract seen against red reflex



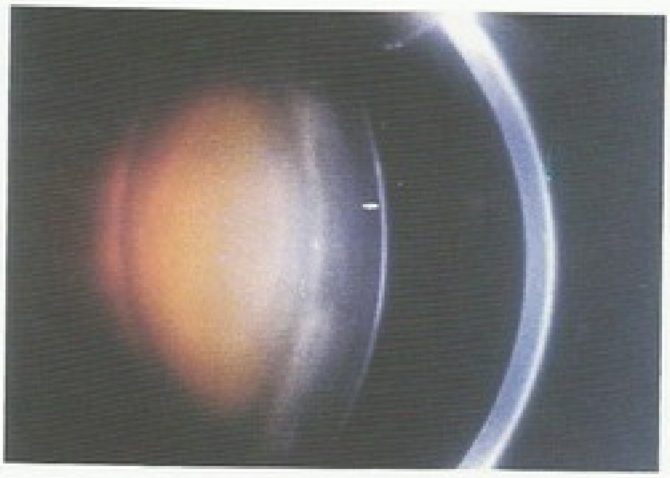
Nuclear cataract



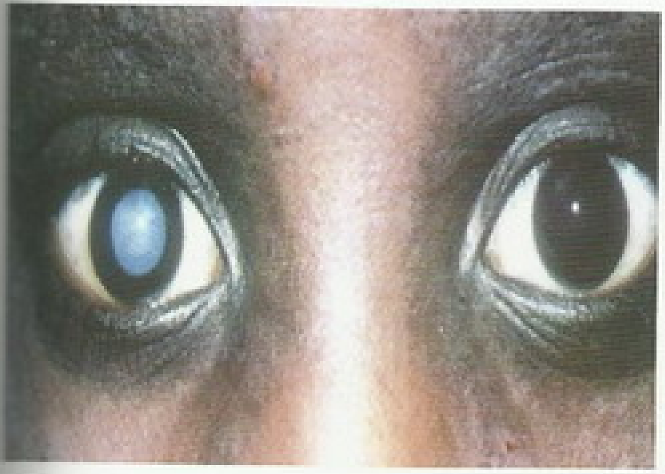
Nuclear cataract (slit view)



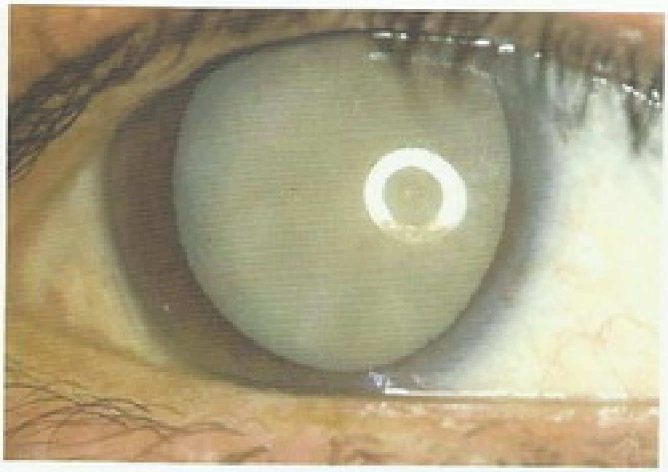
Nuclear cataract, anterior cortical & posterior subcapsular cataract (slit view)



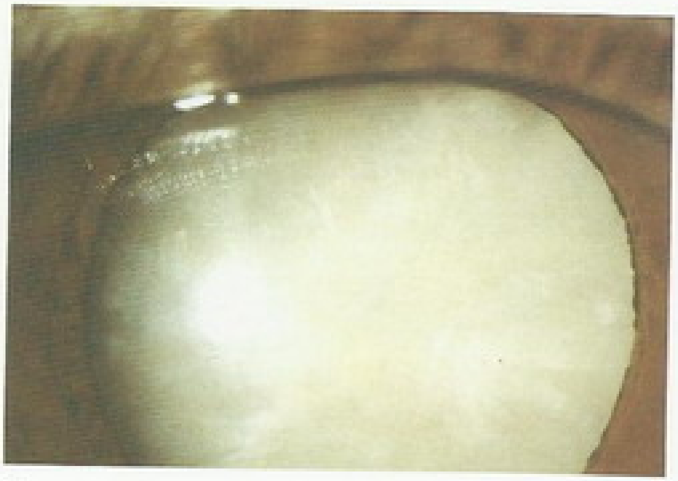
Brown cataract



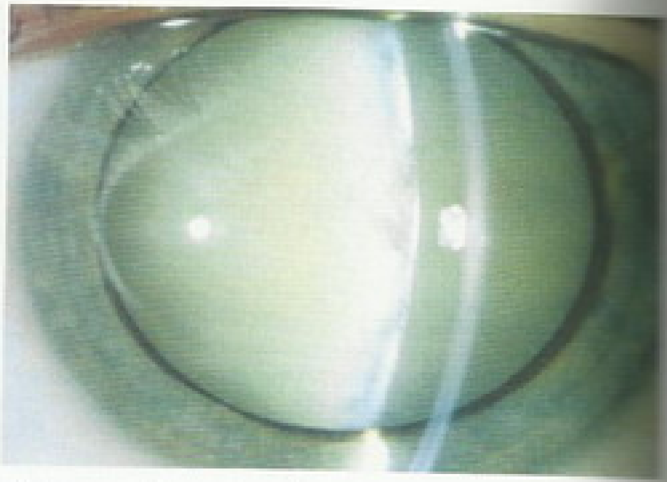
RT complicated cataract due to atopic dermatitis



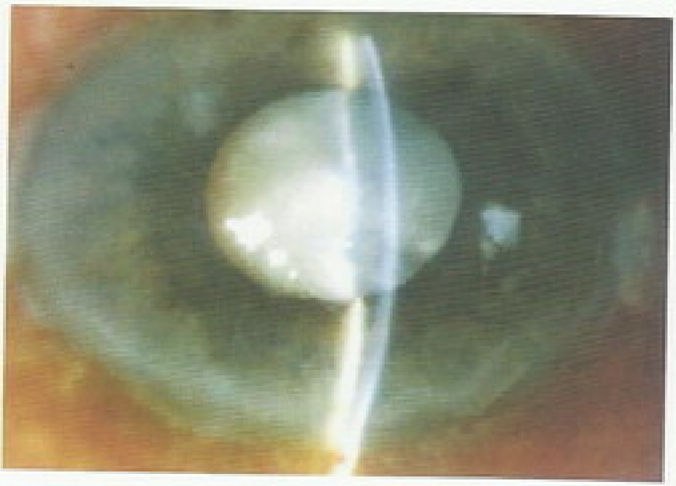
Mature senile cataract



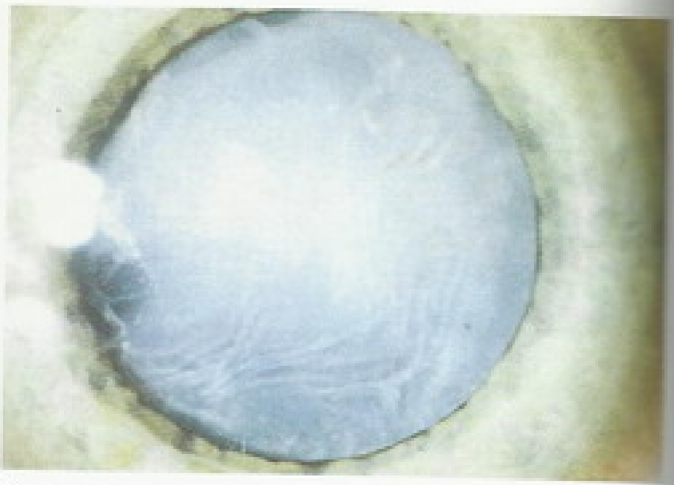
Mature senile cataract



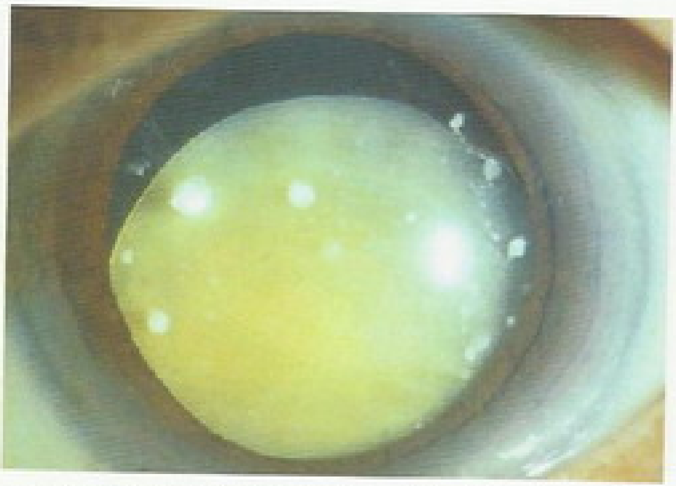
Mature senile cataract



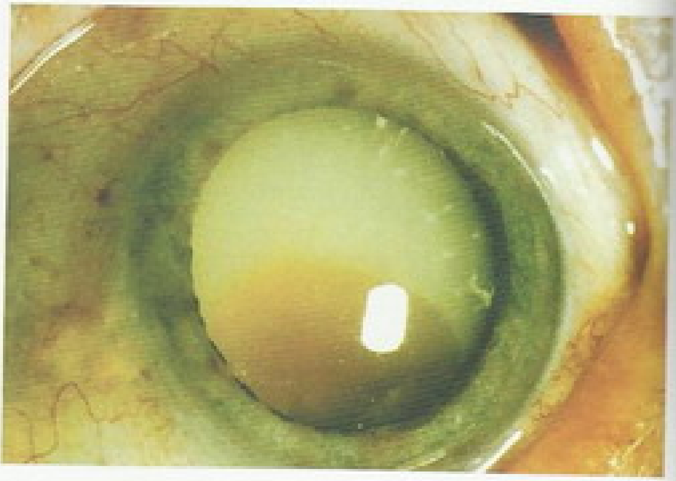
Intumescent lens (see shallow AC and red eye and glistening capsule)



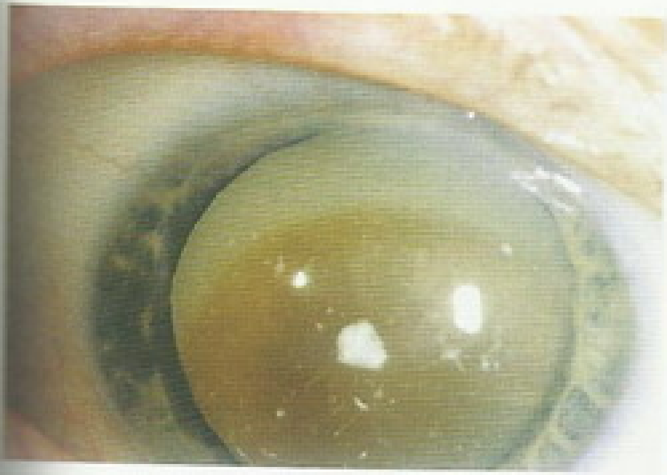
Hypermature cataract (see the wrinkling of the capsule)



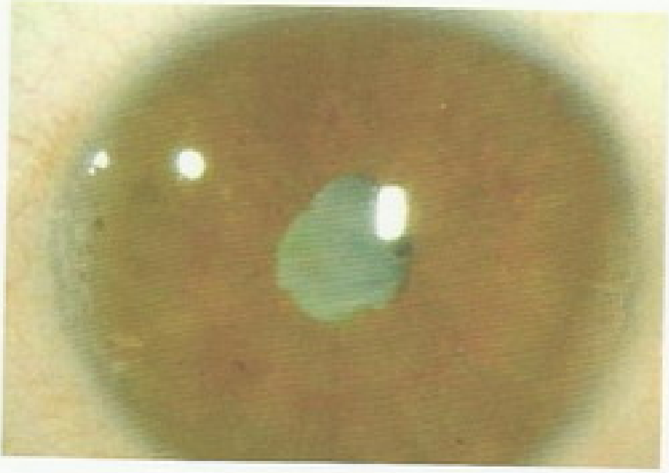
Hypermature cataract with sublaxation (see the white Ca++ deposits)



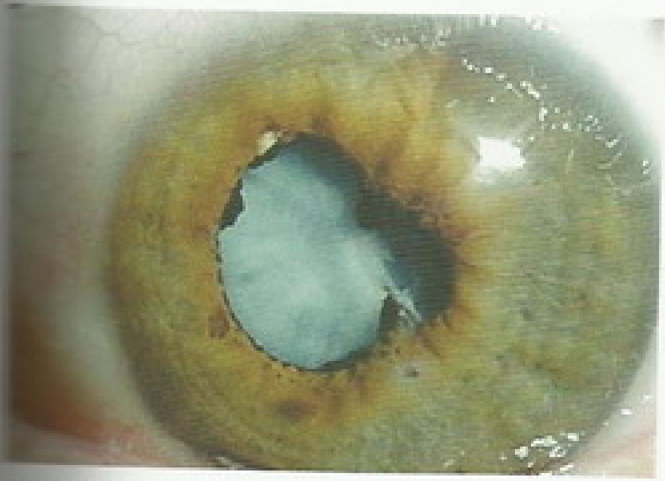
Morgagnian cataract (the nucleus sinks by gravity to the lower part of lens as the nucleus is present in a liquefied lens)



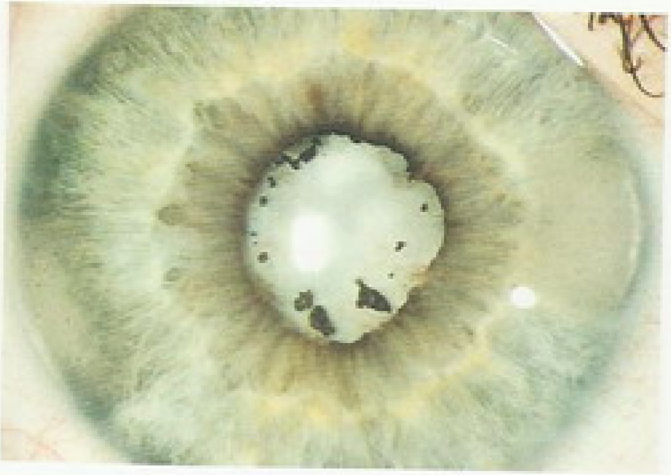
Morgagnian cataract



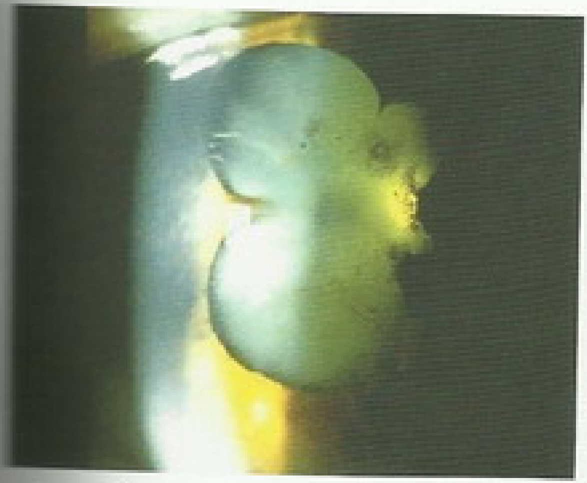
Complicated cataract (note irregular pupil indicates chronic irido-cyclitis)



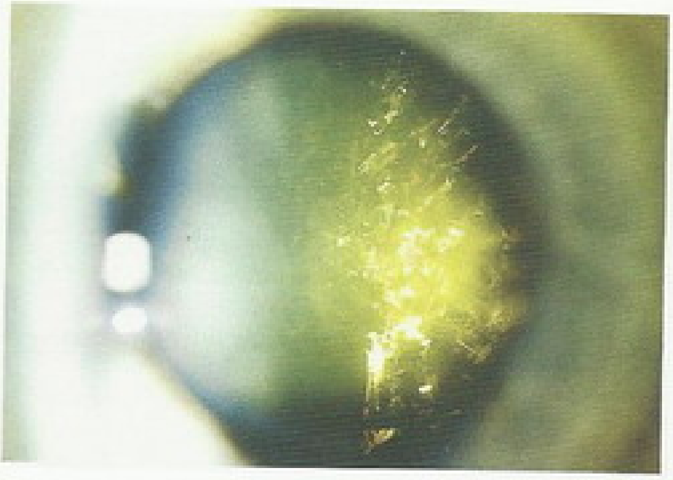
Posterior synechia with complicated cataract due to chronic irido-cyclitis



Complicated cataract due to chronic irido-cyclitis (note iris pigment on the lens)

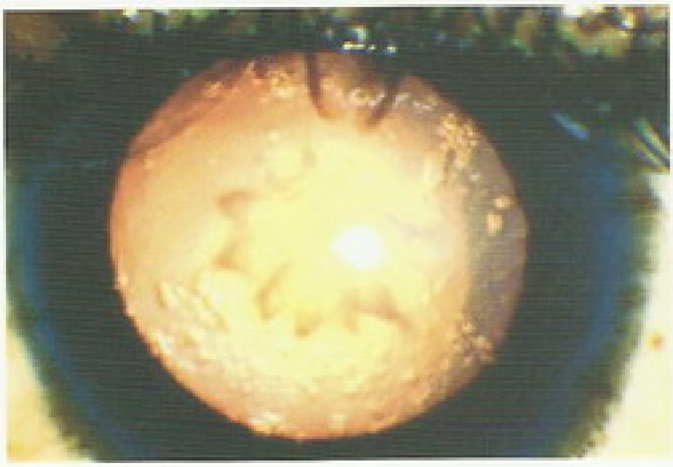


Complicated cataract due to chronic irido-cyclitis (note festooned pupil)

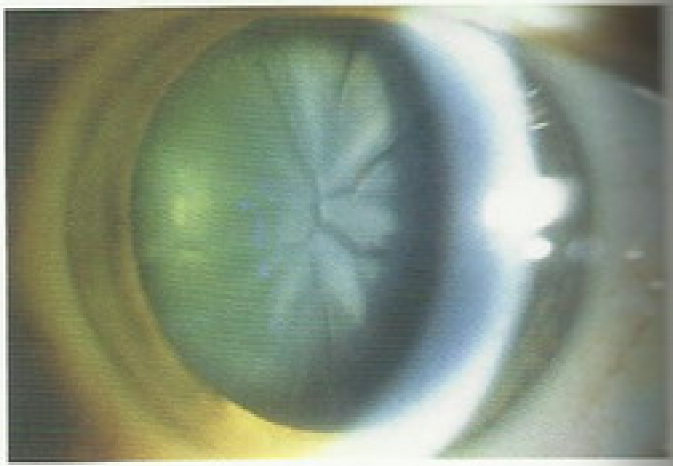


Polychromatic lens opacity

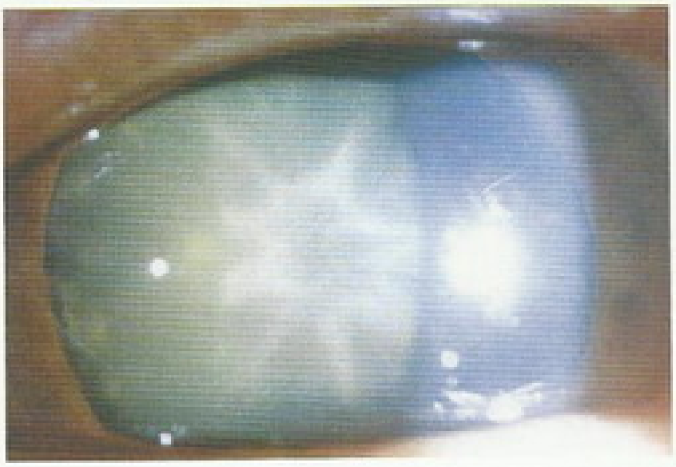
WhiteNightLove



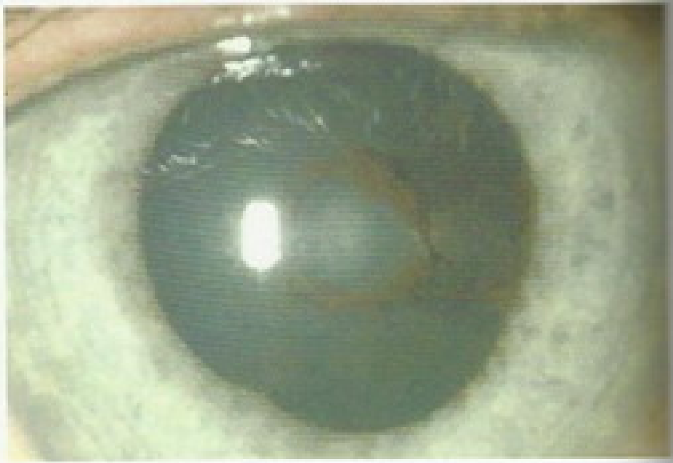
Traumatic cataract (star-shaped) seen against red reflex



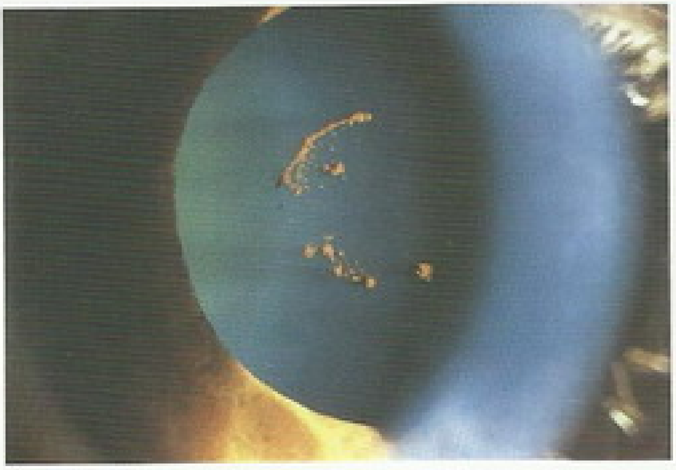
Traumatic cataract (flower-shaped)



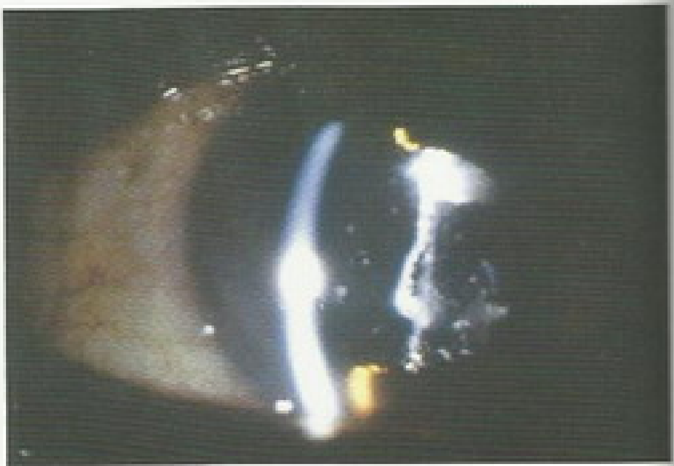
Traumatic cataract (rosette- shaped)



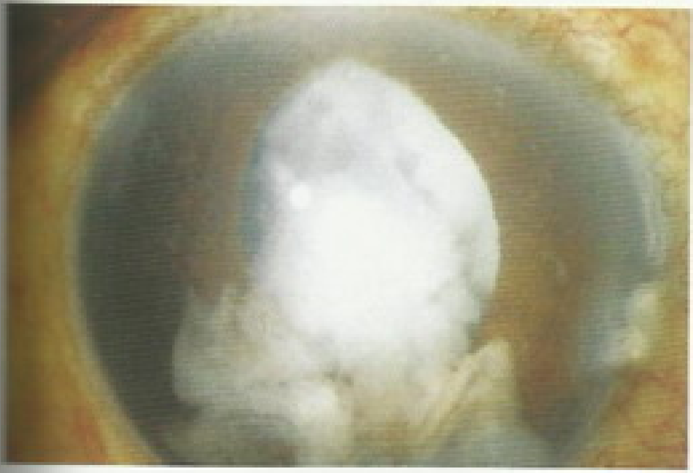
Vossius ring due to blunt trauma



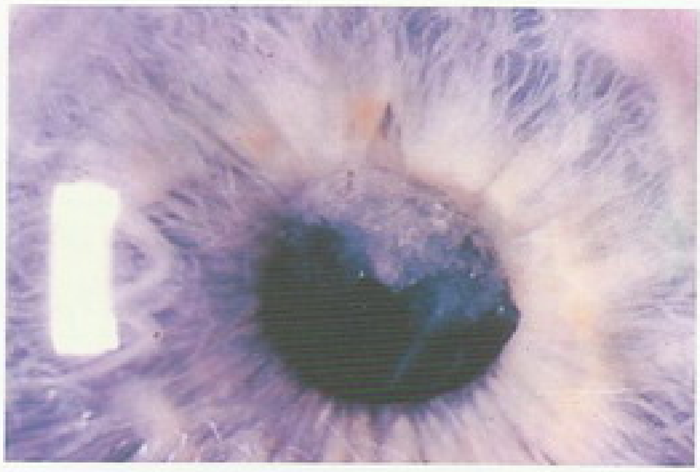
Vossius ring



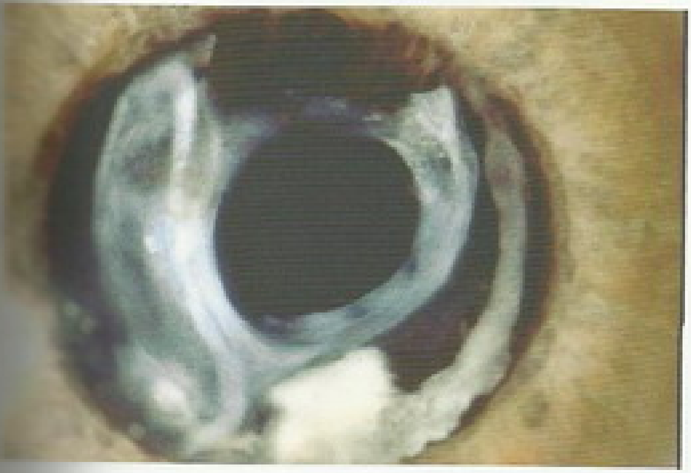
Membranous cataract



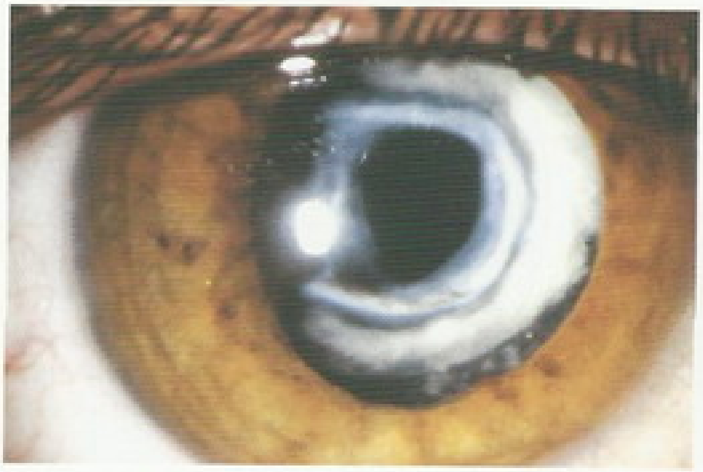
After cataract



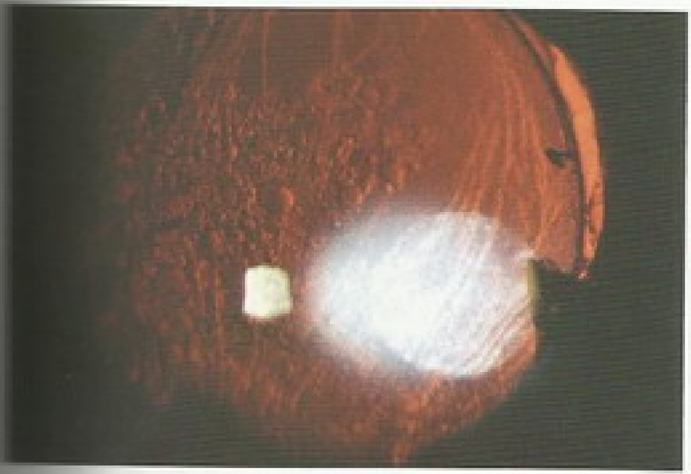
After cataract (residual lens matter in the pupillary area)



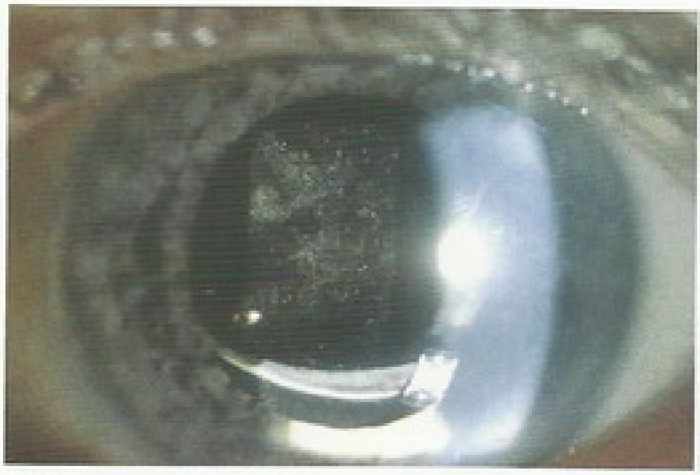
Sommering ring



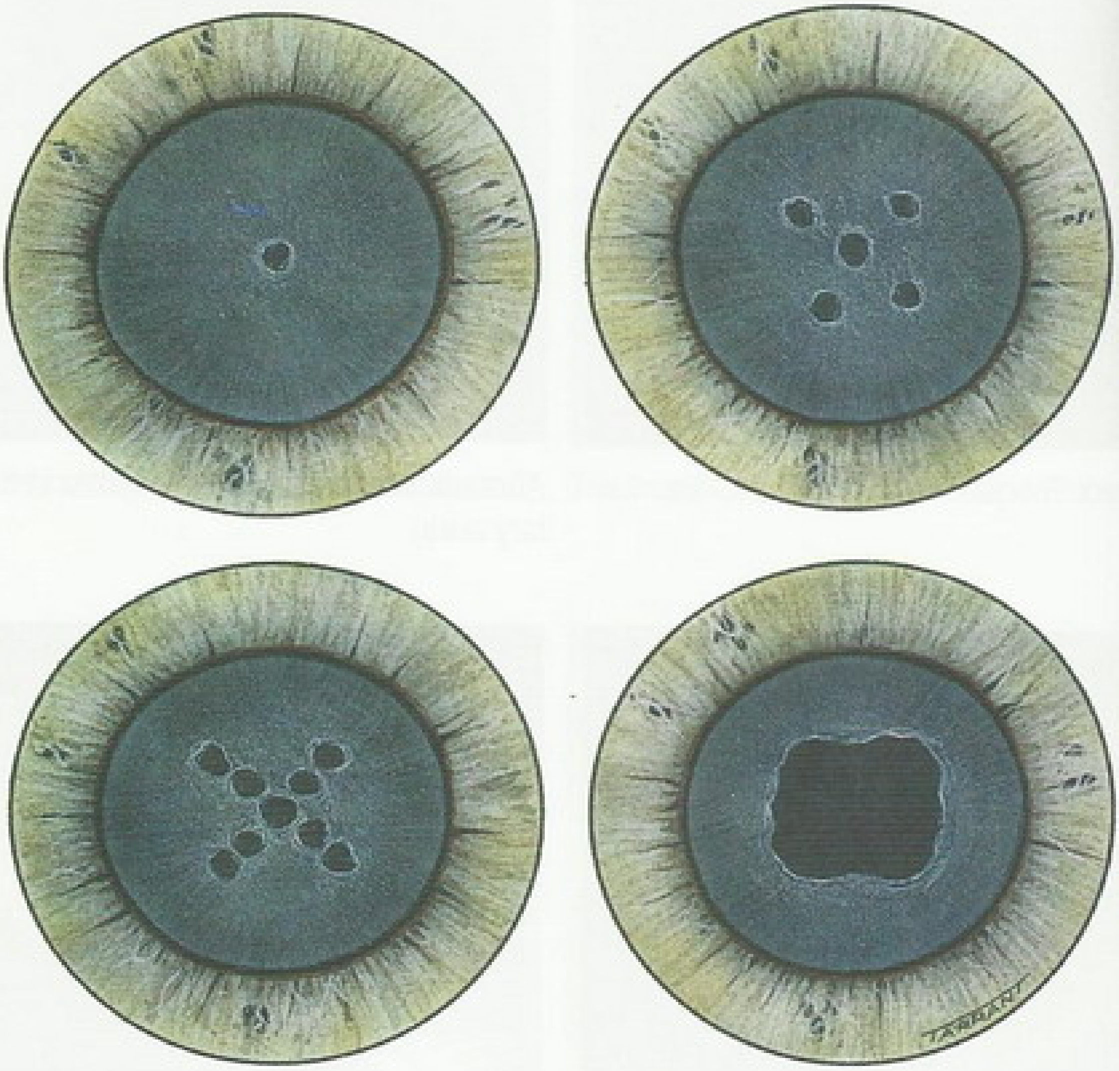
Sommering ring



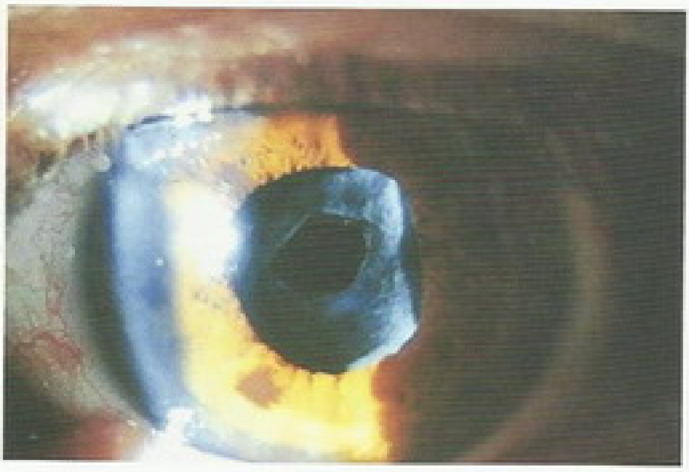
Elschnig's pearls (seen against red reflex)



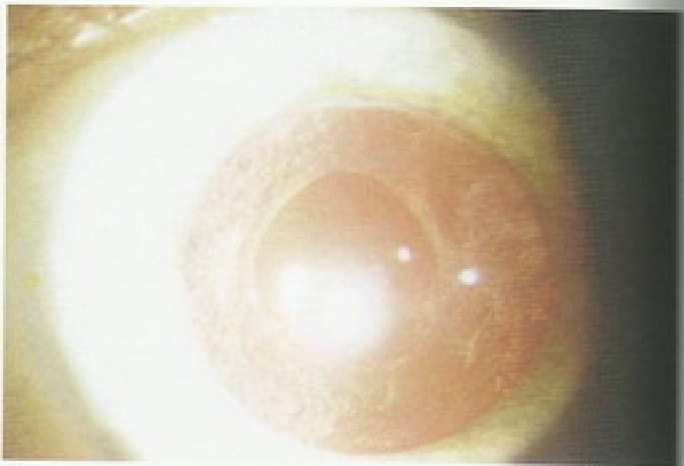
Thin after cataract (posterior capsule opacification = PCO)



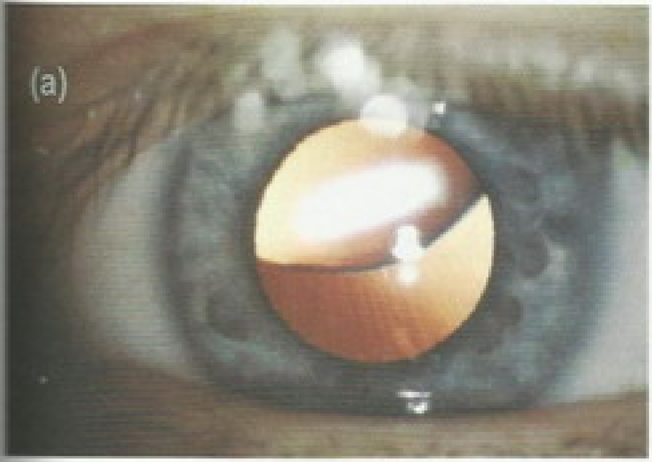
Technique f YAG laser capsulotomy

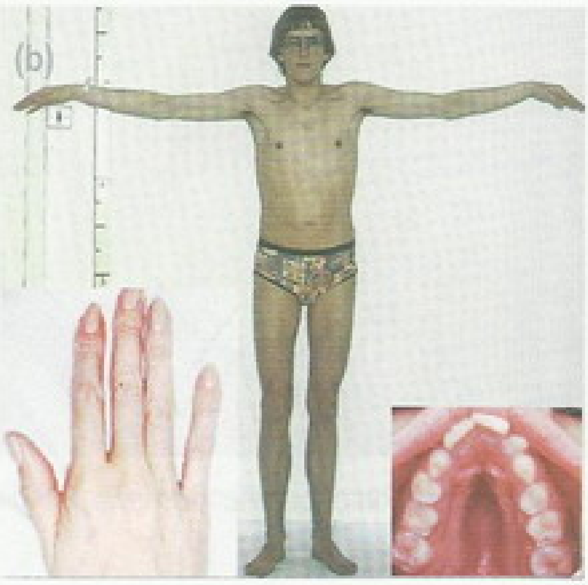


YAG laser capsulotomy

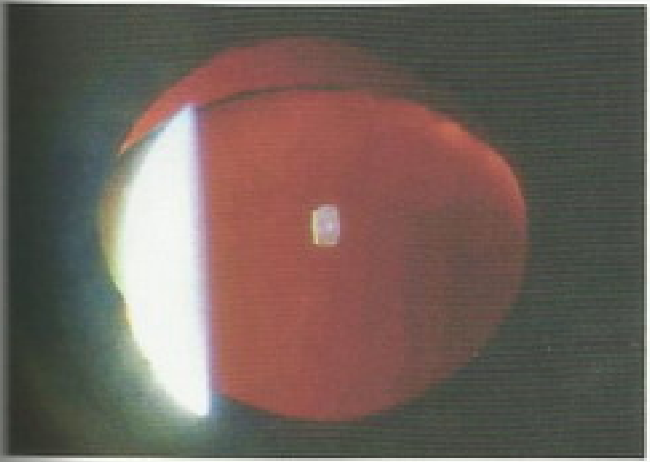


YAG laser capsulotomy

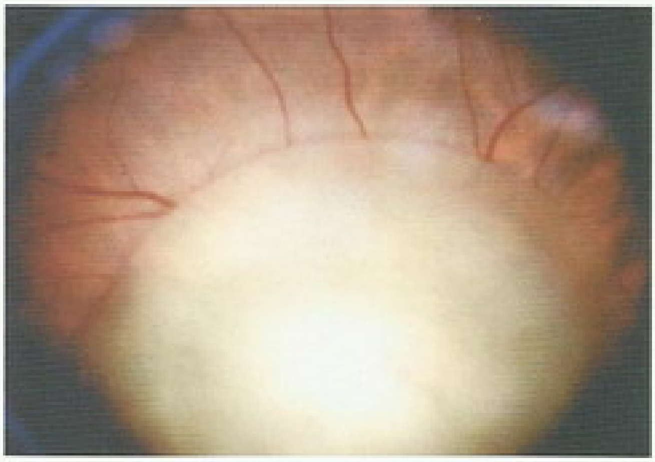




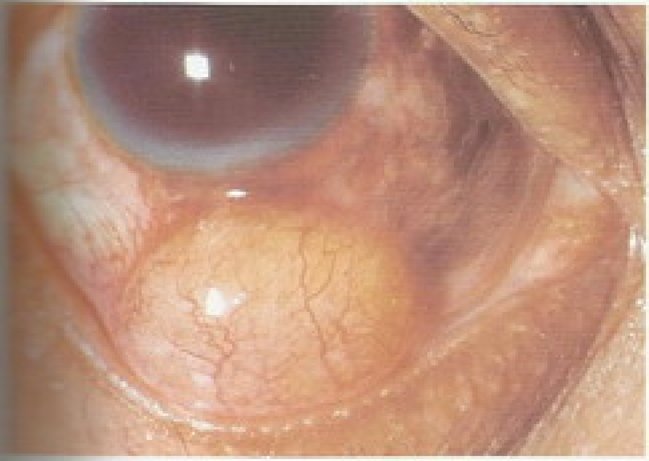
Upward sublaxation (sun rise)
a&b Marfans syndrome >>



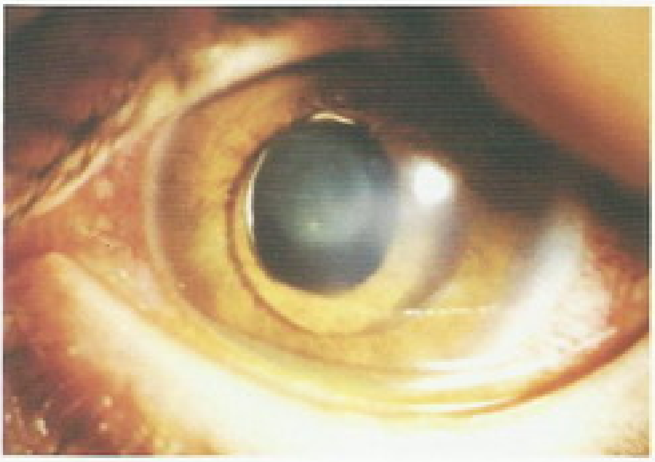
Inferior Sublaxation (sun set)



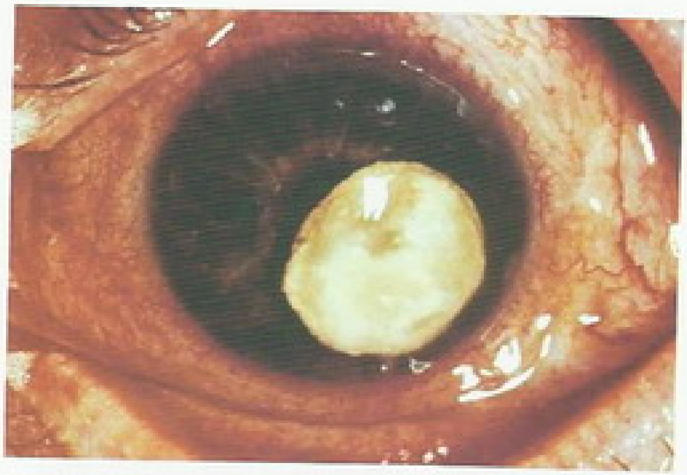
Posterior dislocation of cataractous lens



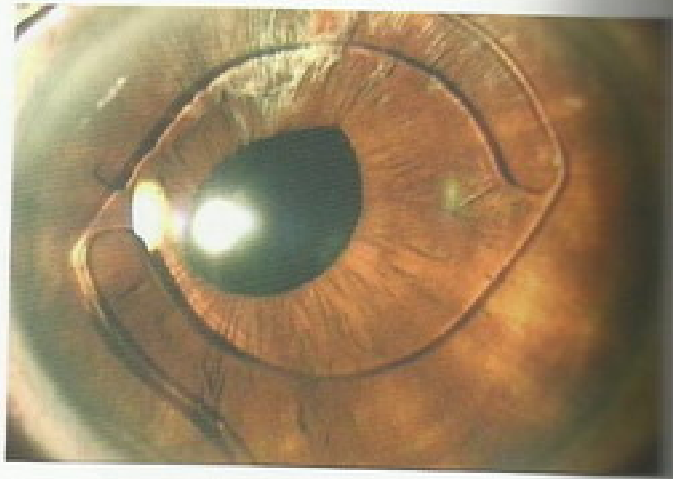
Subconjuctival dislocation



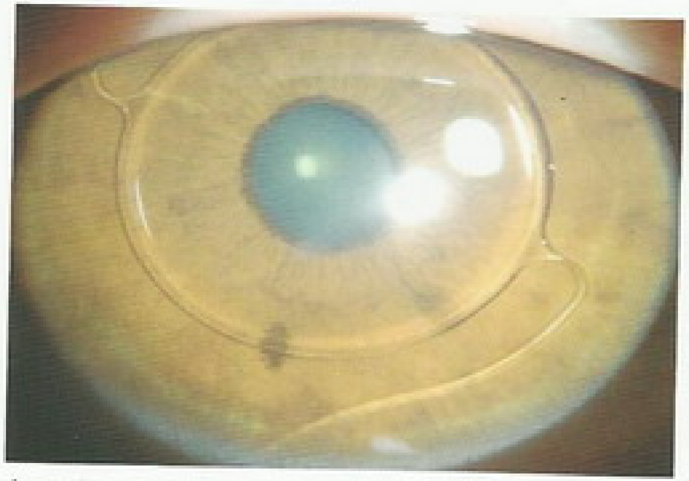
Anterior dislocated crystalline lens.



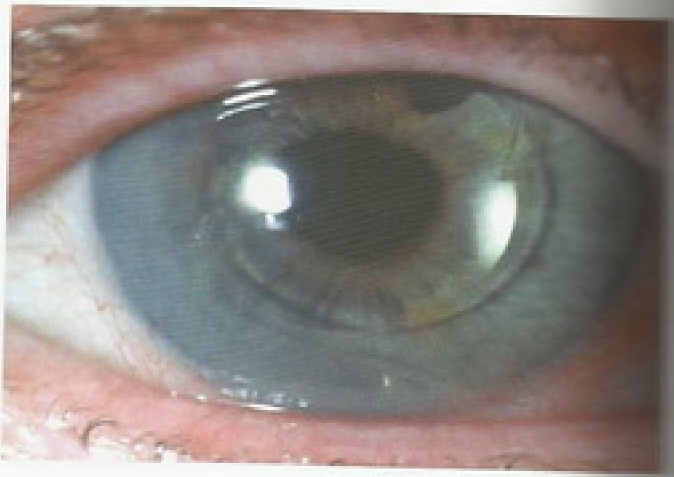
Anterior dislocation of cataractous lens



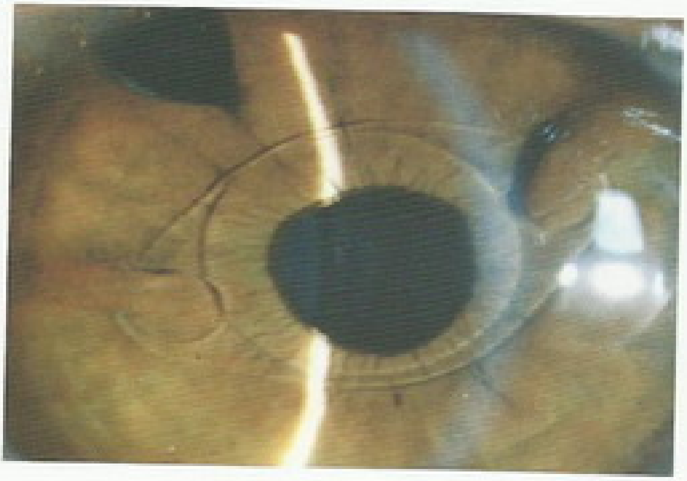
Anterior chamber IOL



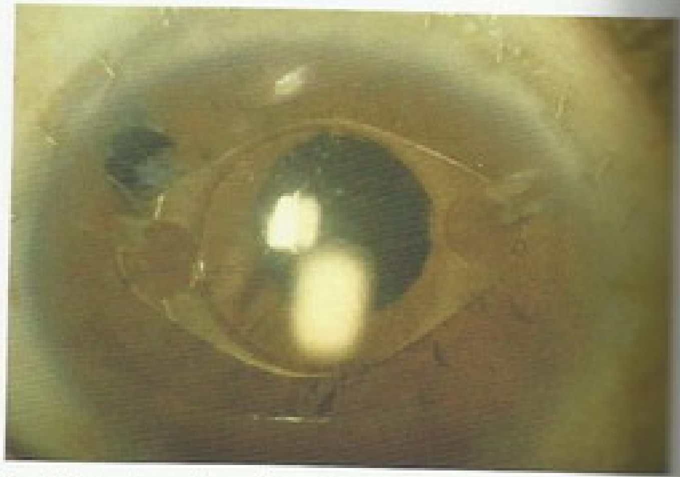
Anterior chamber



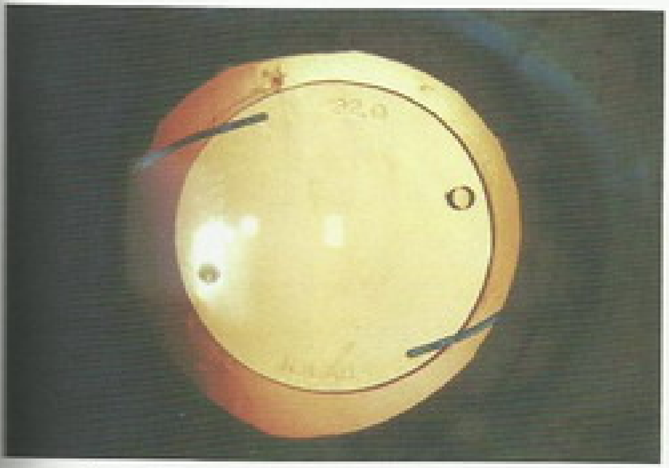
Anterior chamber IOL with peripheral iridectom



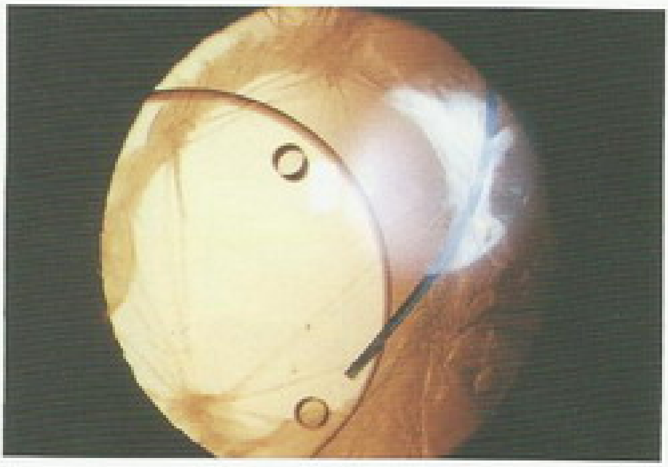
AC iris claw IOL



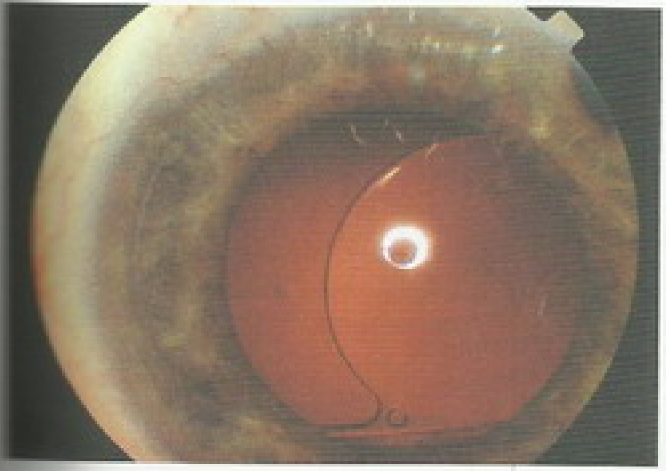
Anterior chamber iris claw IOL



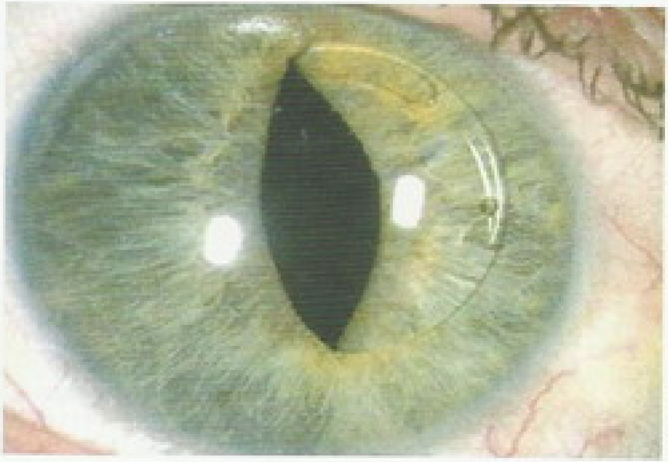
Posterior chamber IOL



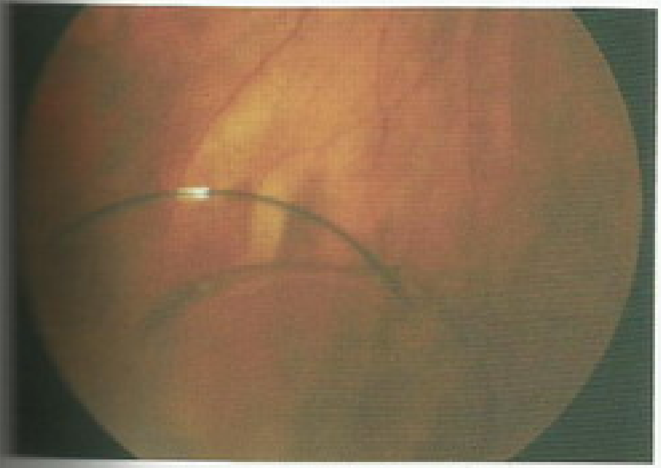
Decentration of Posterior chamber IOL



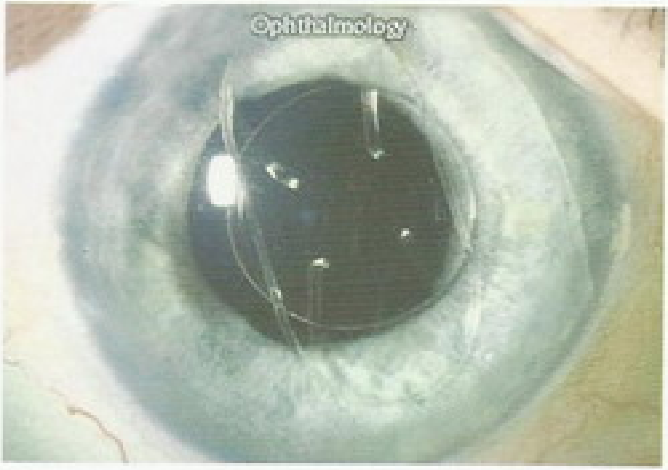
OL decentration



Captured lens (Decentration of Posterior chamber IOL)

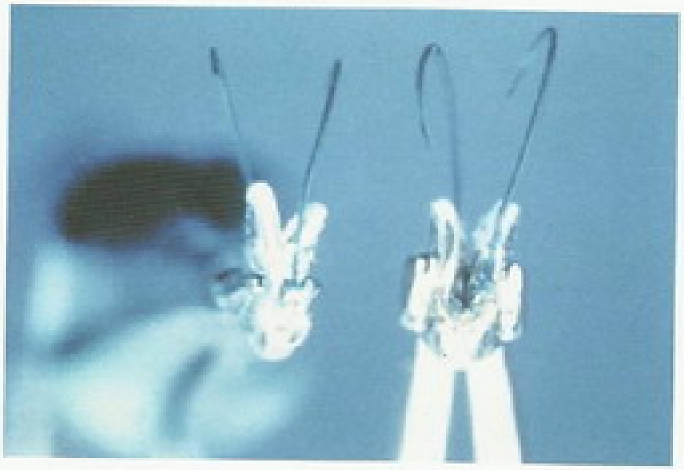


OL on the retina

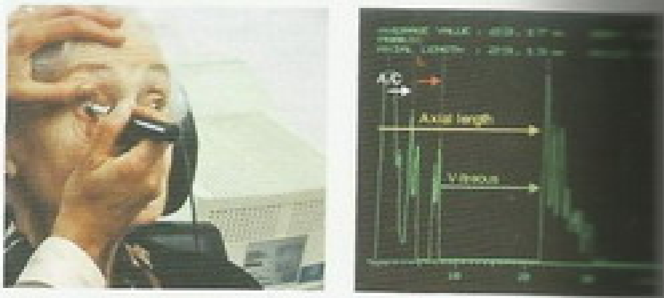


Ophthalmology

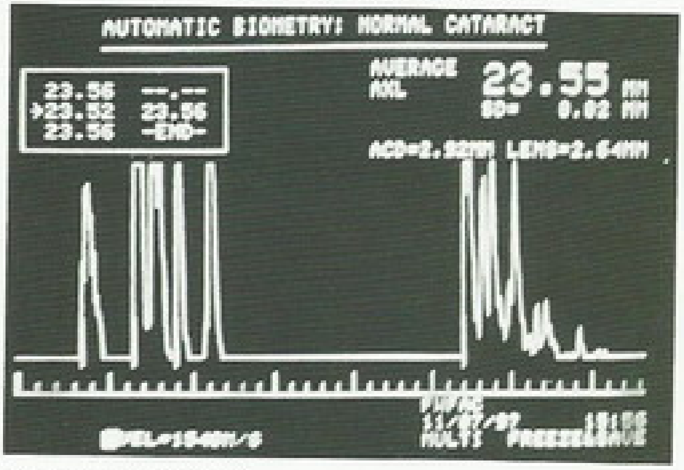
Iris supported IOL



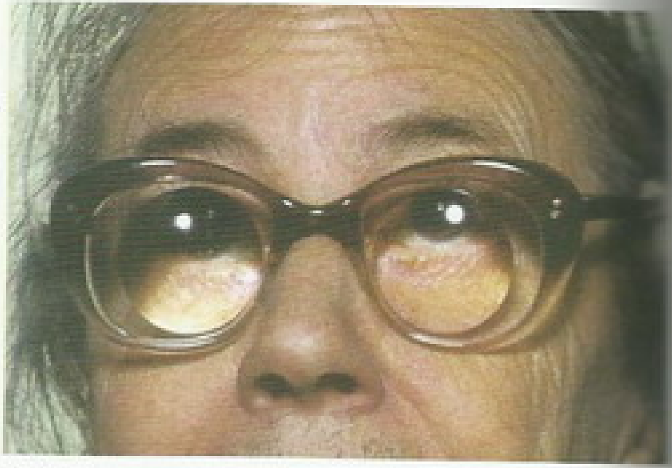
Foldable IOL


A/C
Axial length
Vitreous

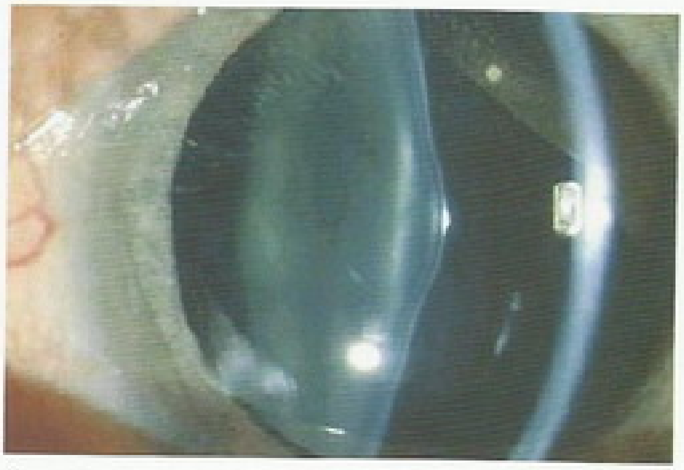
A-scan ultrasound(Biometry)



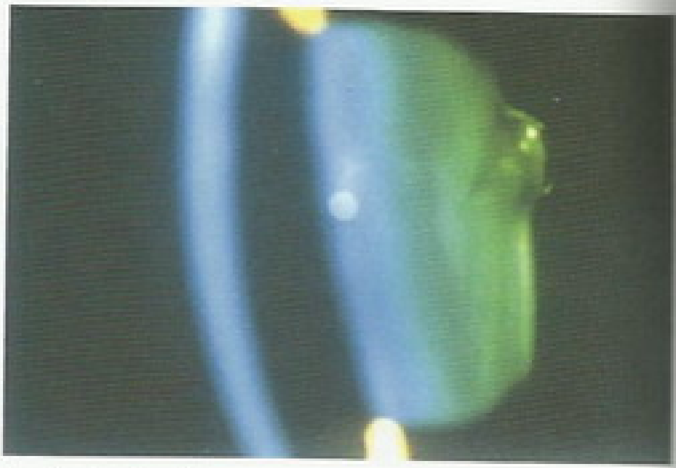
A scan ultrasound



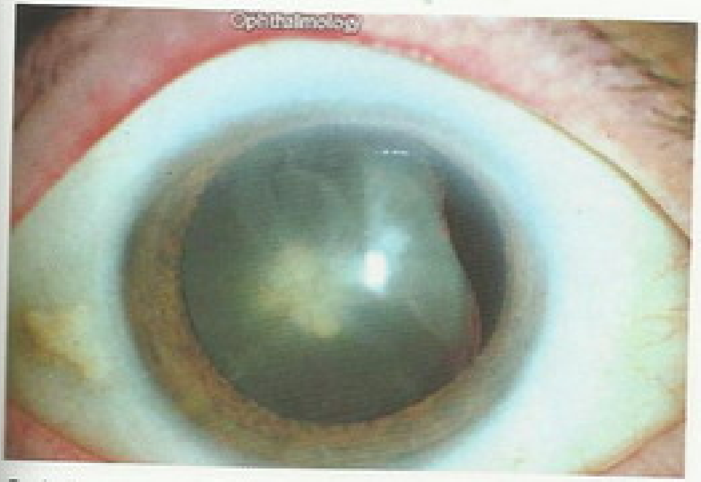
Aphakic correction with glassess



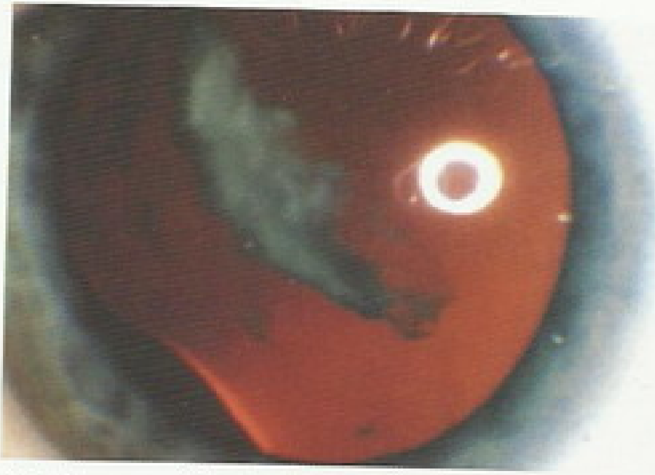
Anterior lenticonus



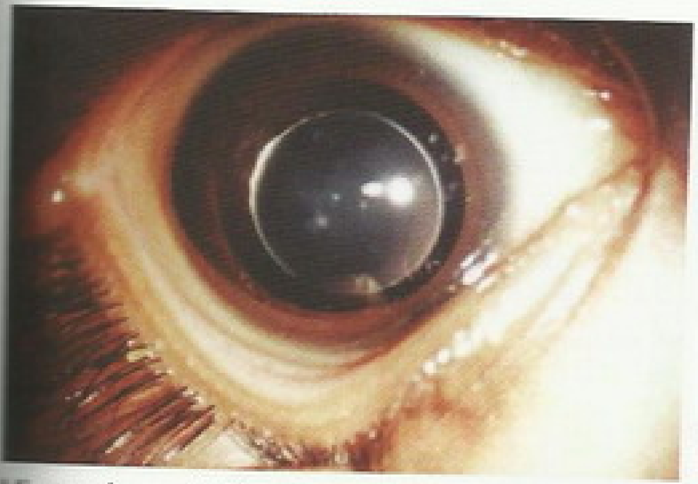
Posterior lenticonus


Ophthalmology

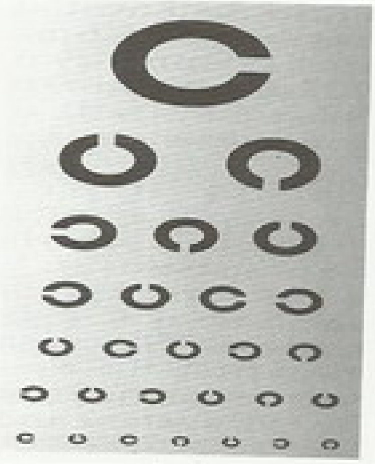
Coloboma of the lens



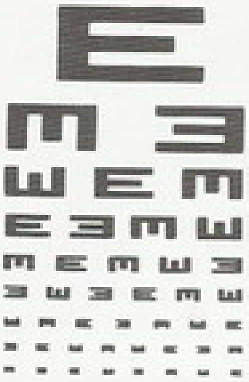
Coloboma of the lens



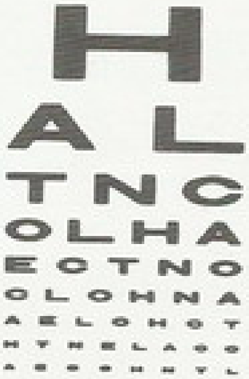
Microspherophakia



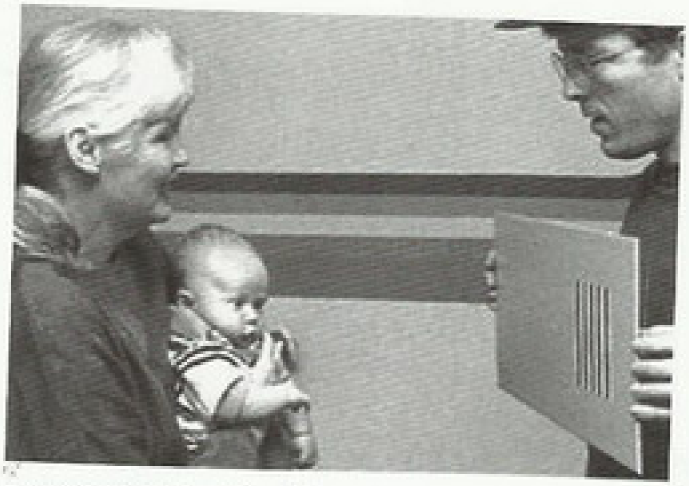
Landolt`s broken rings for testing V.A. in adults



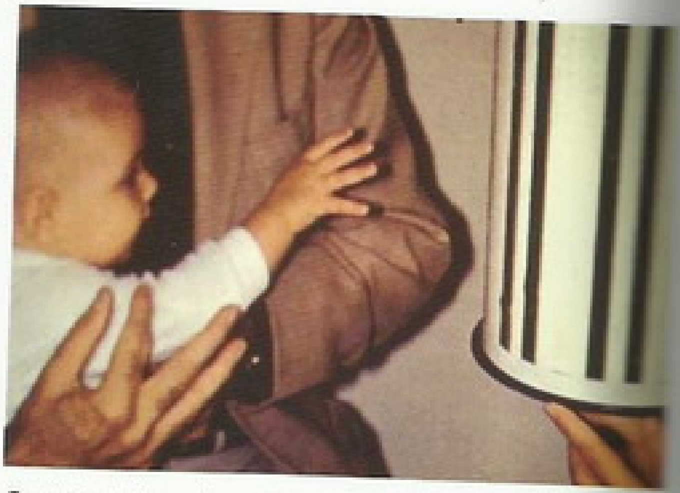
Snellen`s E chart


H
A L
T N C
O L H A
E C T N O
O L O H N A

Sellens chart (letters) for testing V.A. in adults



Preferantioal looking for measurement of V.A. in children

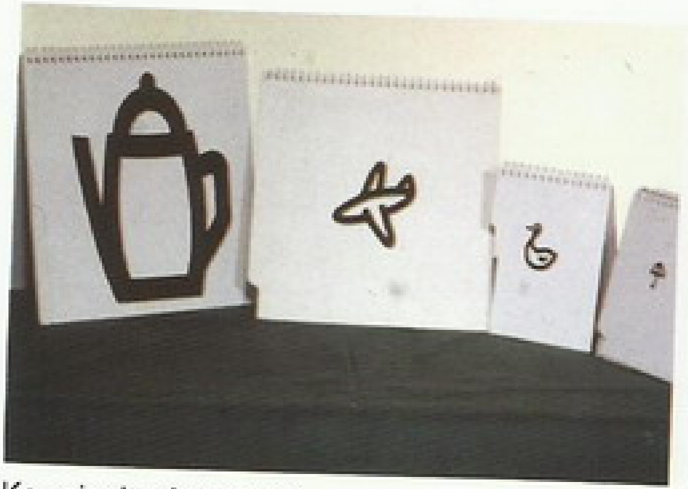


Cat-ford drum (optokinetic nystagmus drum) For testing the V. A. in young children before 2 years

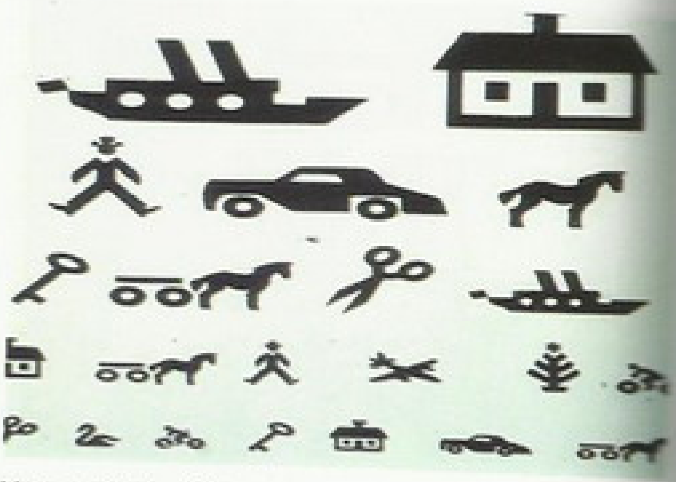
Sheridan Gardiner cards

Keeler Log MAR test

For testing the V. A. in children at the age of 3 years

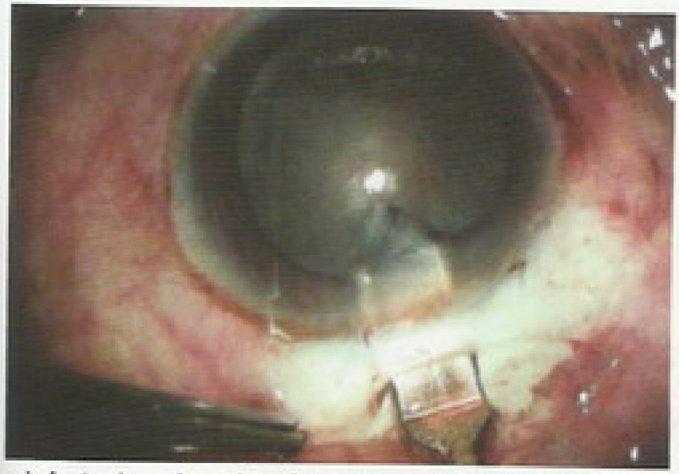


Kay single picture test

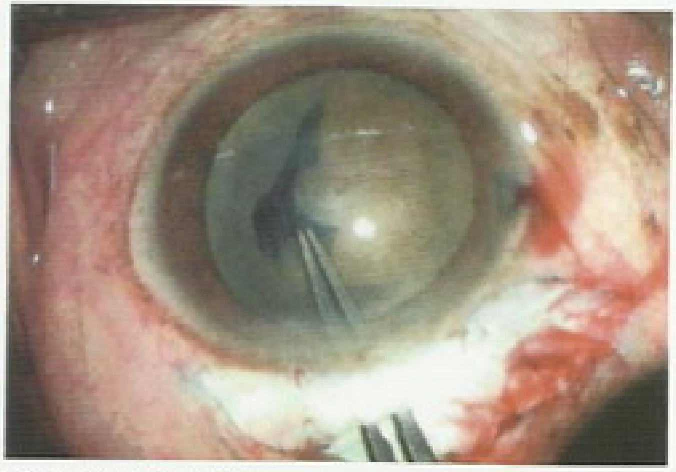


Kay multiple picture test

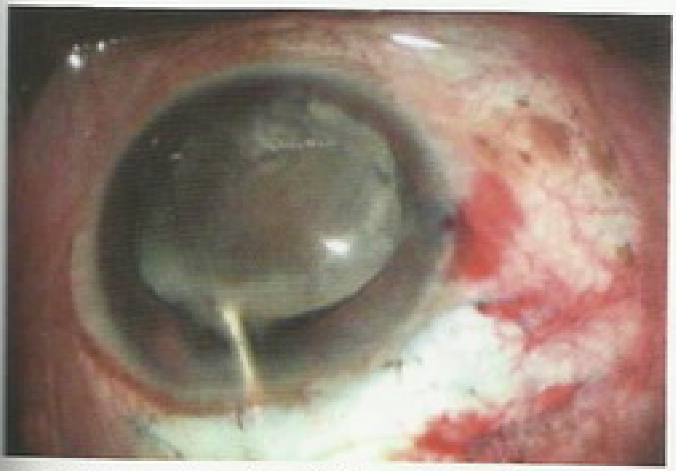
For testing the V. A. in children at the age of 2 years



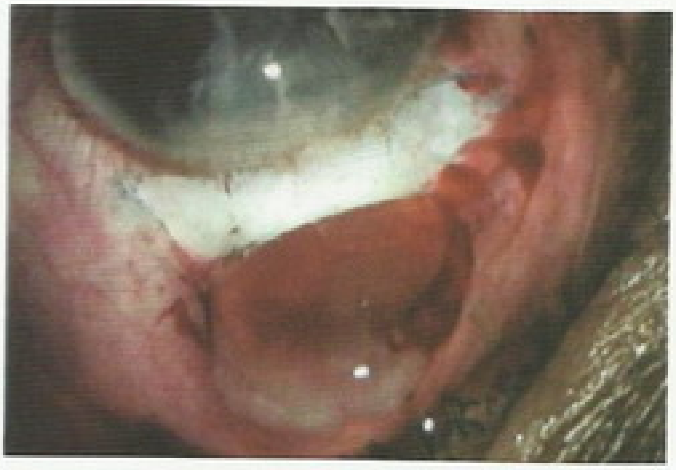
a) Anterior chamber is entered



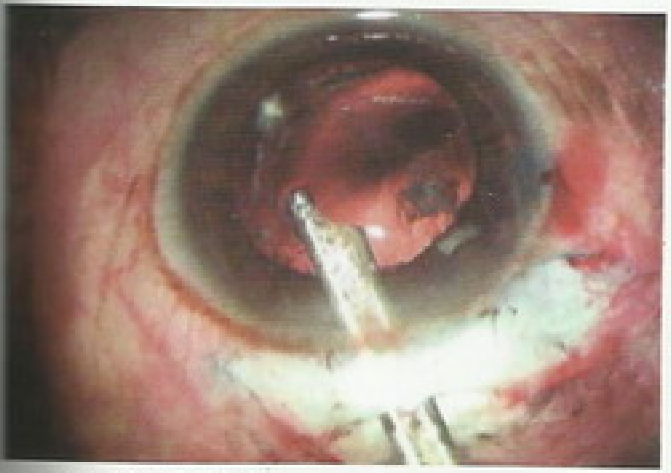
b) Capsulorrhexis



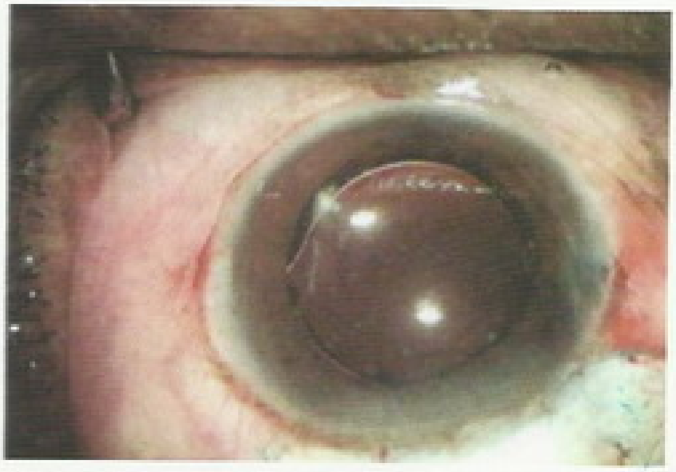
c) Prolapse of nucleus into anterior chamber



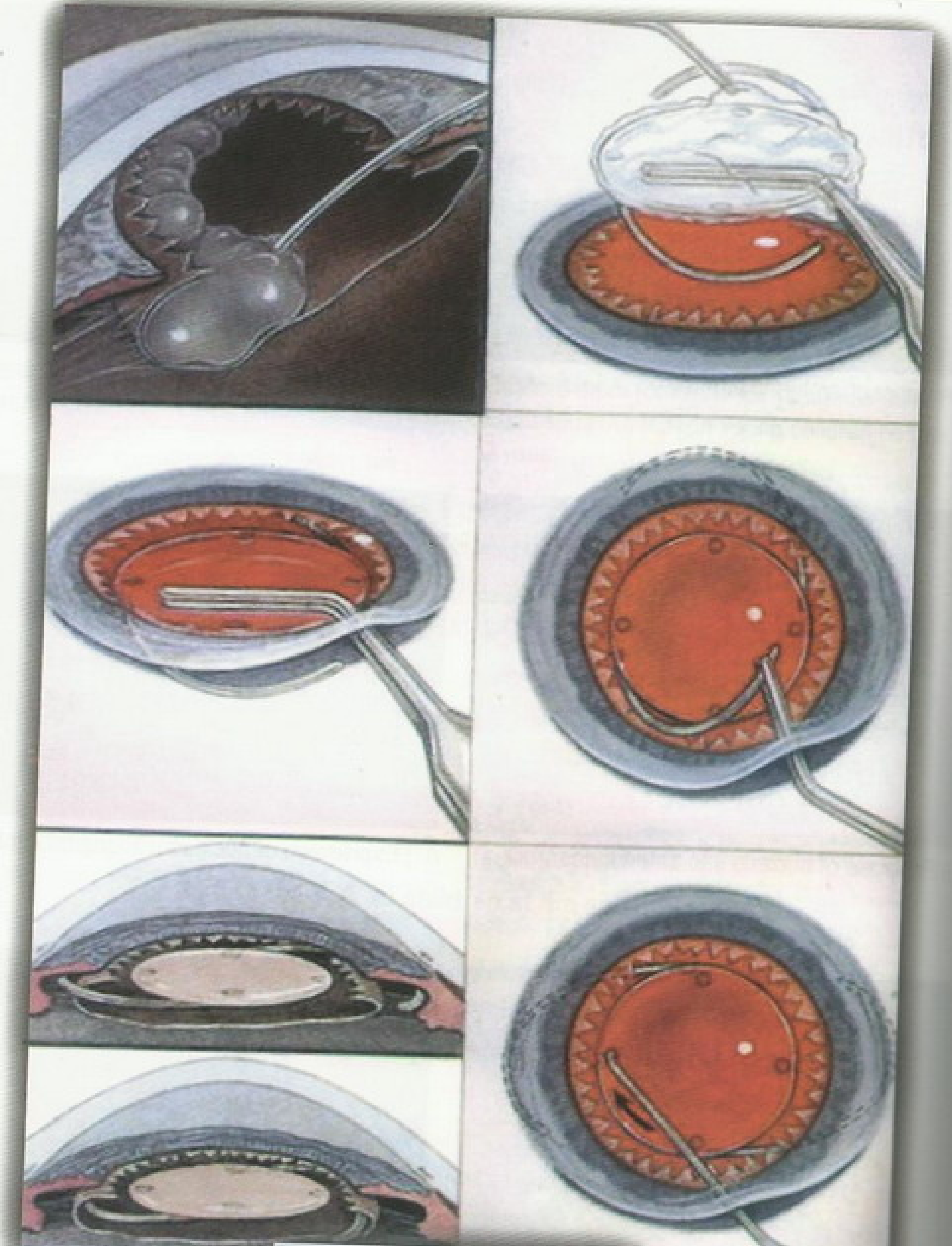
d) Expression of nucleus

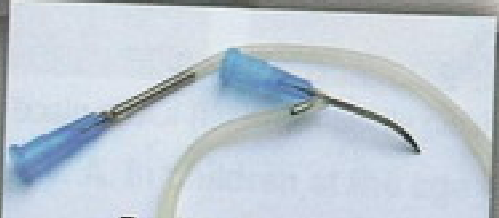


e) Cortical cleanup

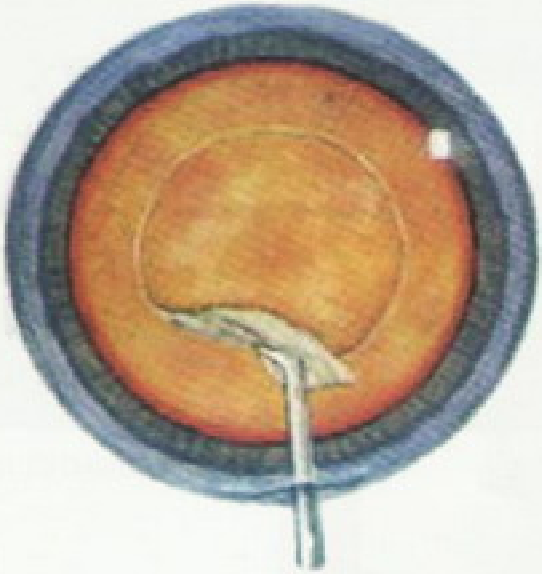


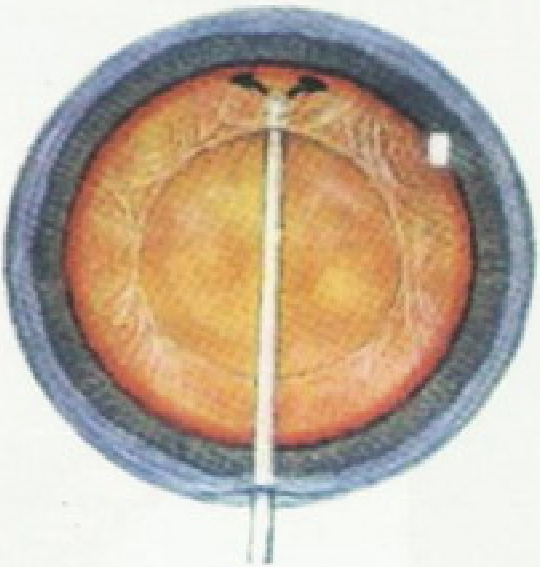
f) IOL in place

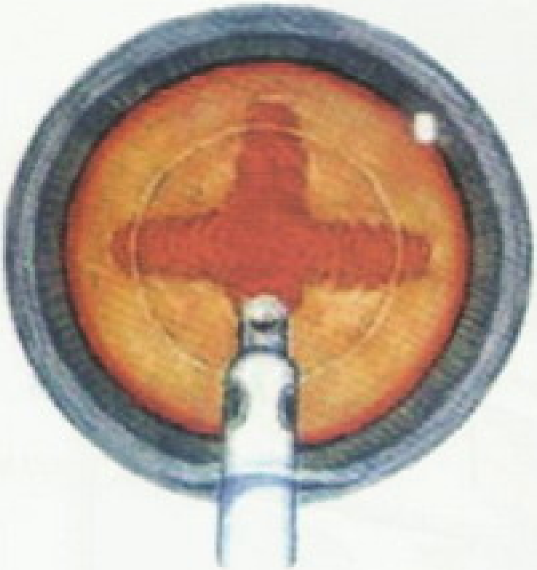


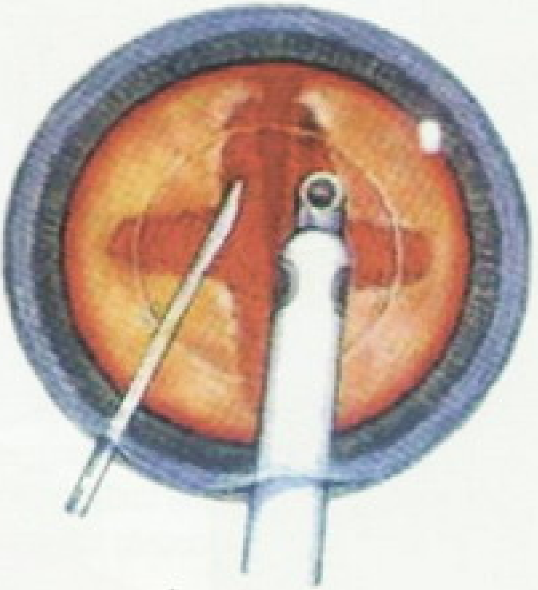


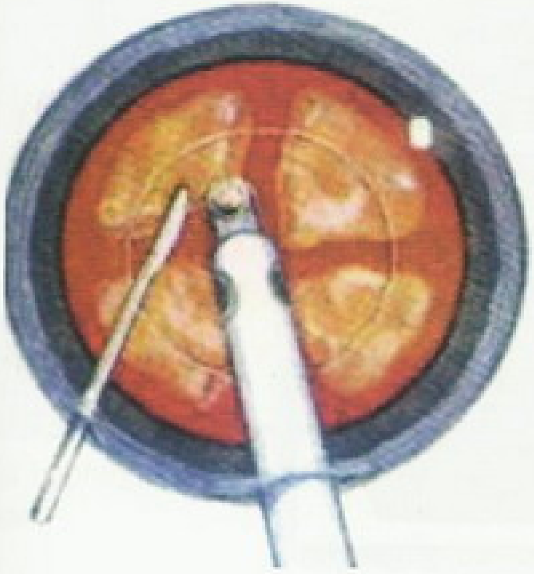
Double way canula

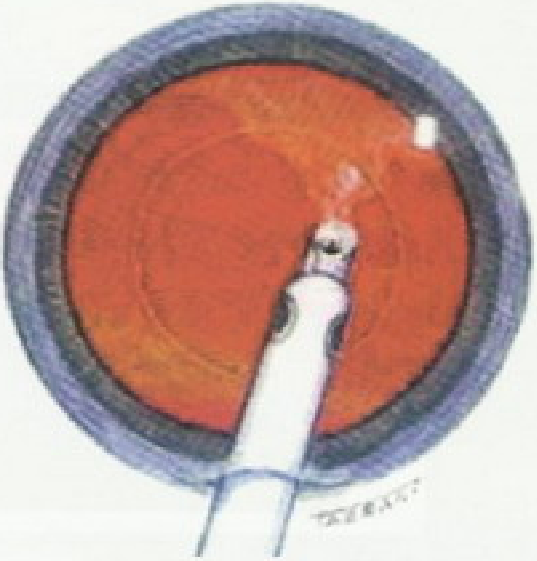






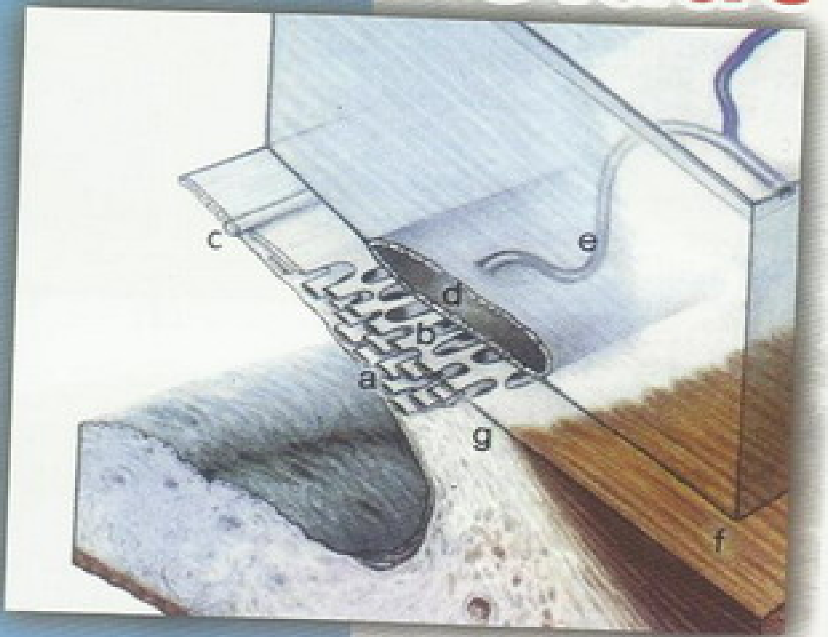


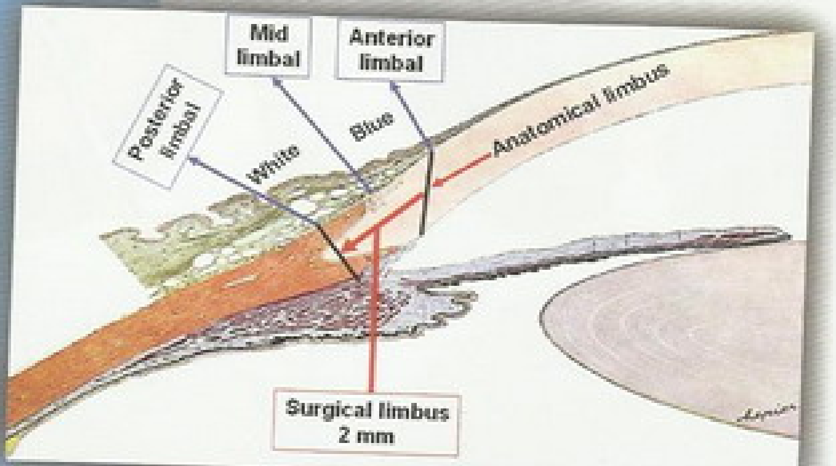


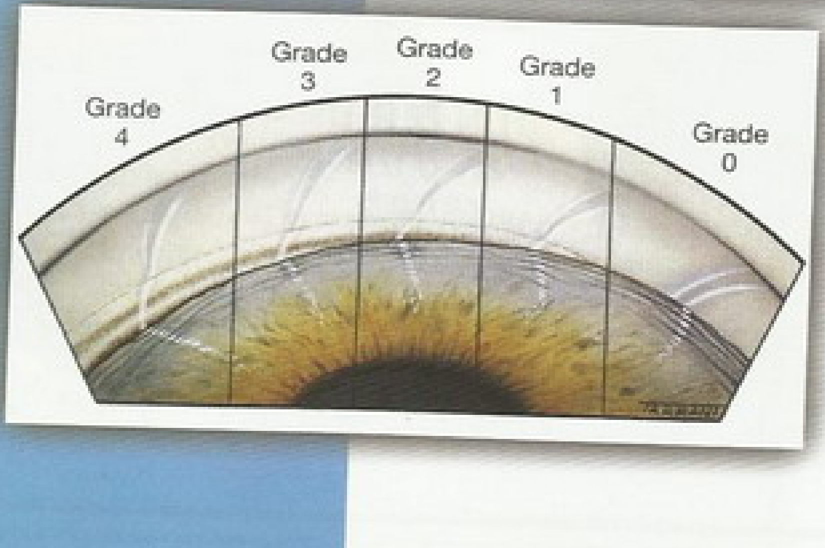


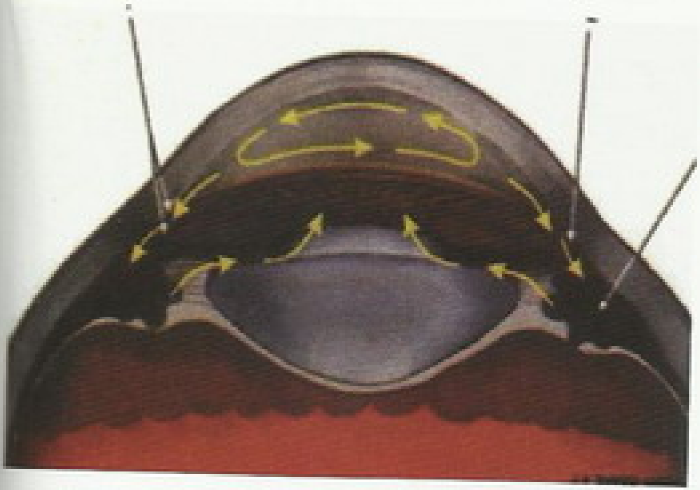
Chapter 9

Glaucoma

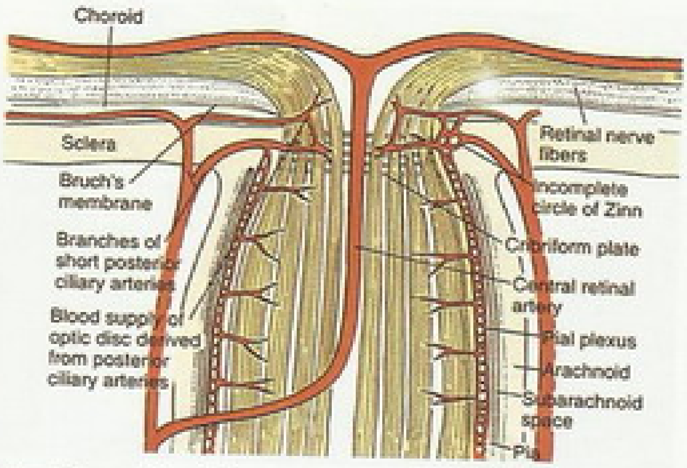



Mid limbal
Anterior limbal
Posterior limbal
White
Blue
Anatomical limbus
Surgical limbus 2 mm

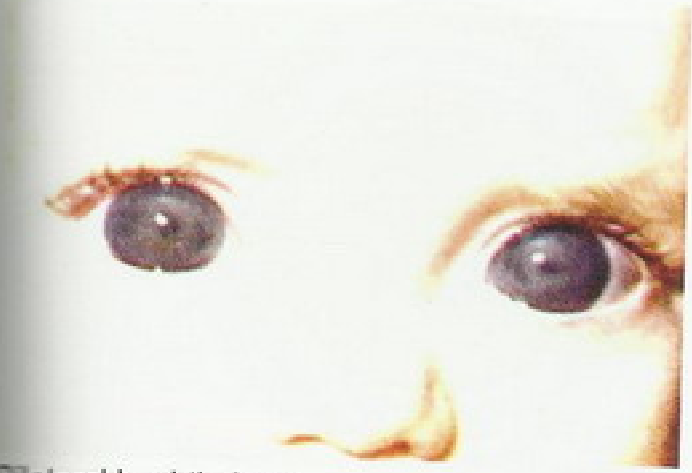

Grade 4
Grade 3
Grade 2
Grade 1
Grade 0



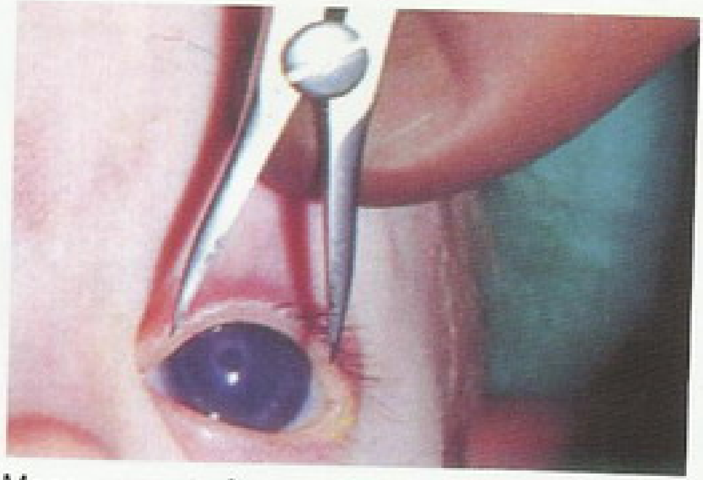
aqueous circulation


Choroid
Sclera
Bruch's membrane
Branches of short posterior ciliary arteries
Blood supply of optic disc derived from posterior ciliary arteries
Retinal nerve fibers
Incomplete circle of Zinn
Cribriform plate
Central retinal artery
Pial plexus
Arachnoid
Subarachnoid space
Pia

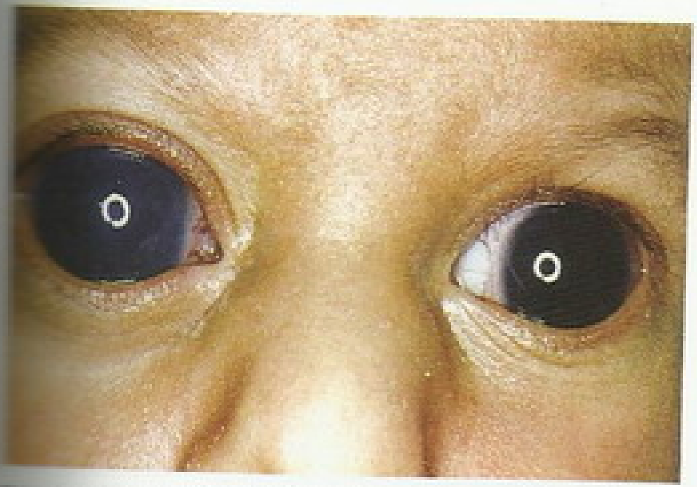
Blood supply of the optic nerve



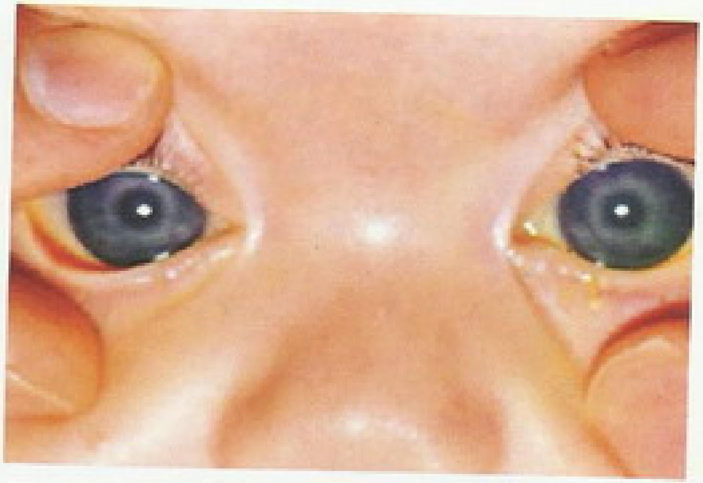
Bilateral buphthalmos



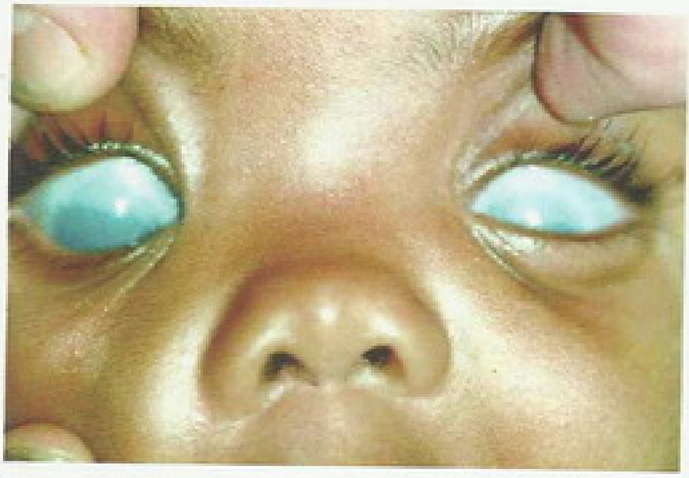
Measurement of corneal diameter using caliber under general anaesthesia in case of congenital glaucoma



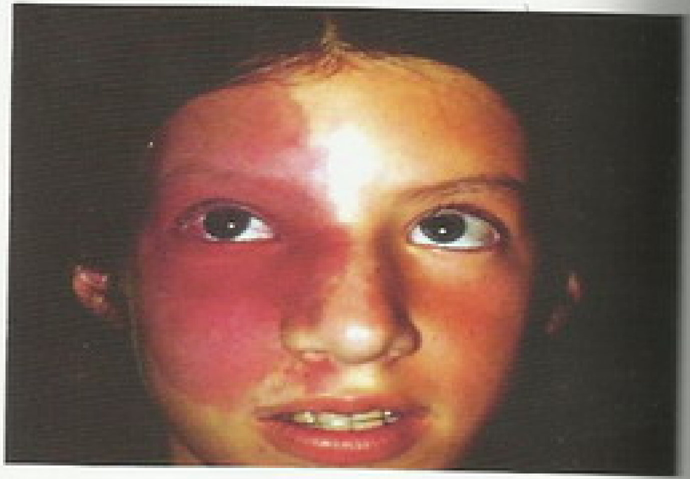
Bilateral buphthalmos (more advanced on the right side)



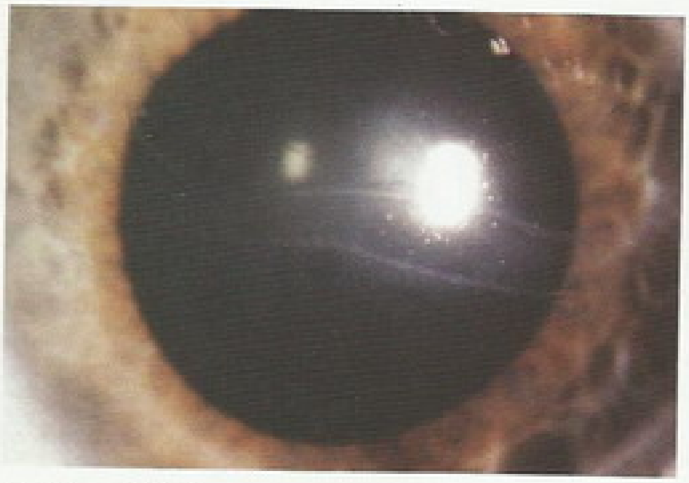
Bilateral buphthalmos



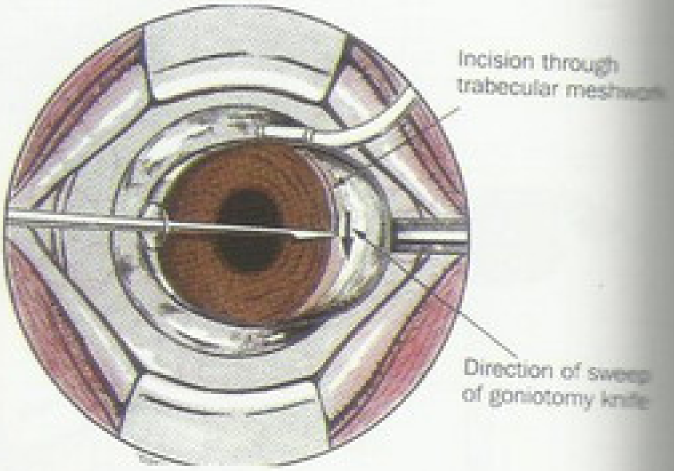
Bilateral buphthalmos (late stage)



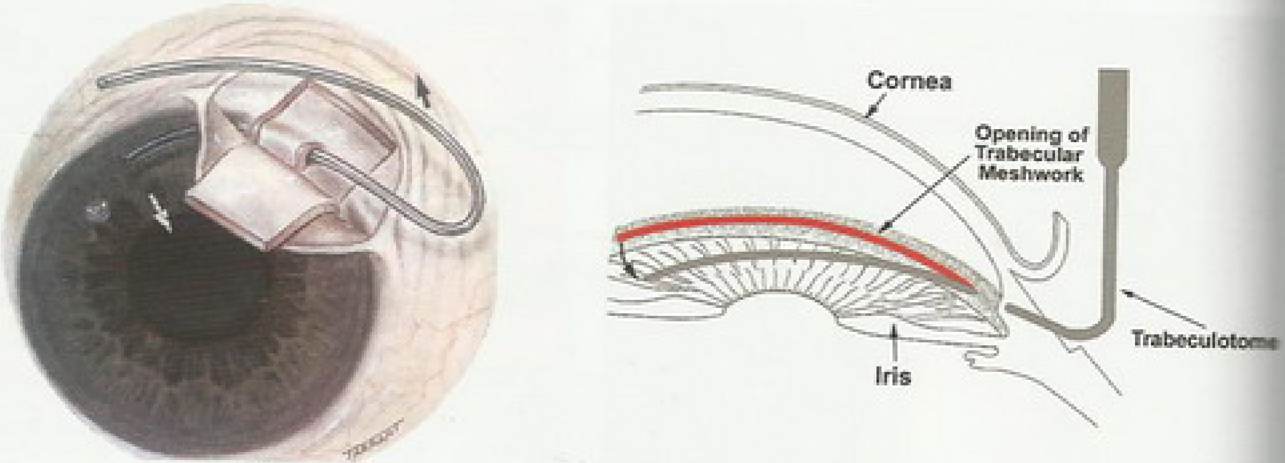
Sturge-Weber syndrome (lead to 2ry buphthalmos)



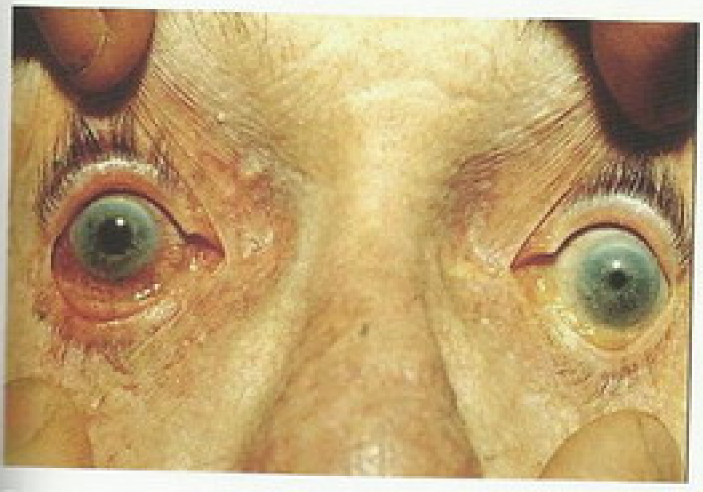
Haab's stria (Linear corneal opacities)


Incision through trabecular meshwork
Direction of sweep of goniotomy knife

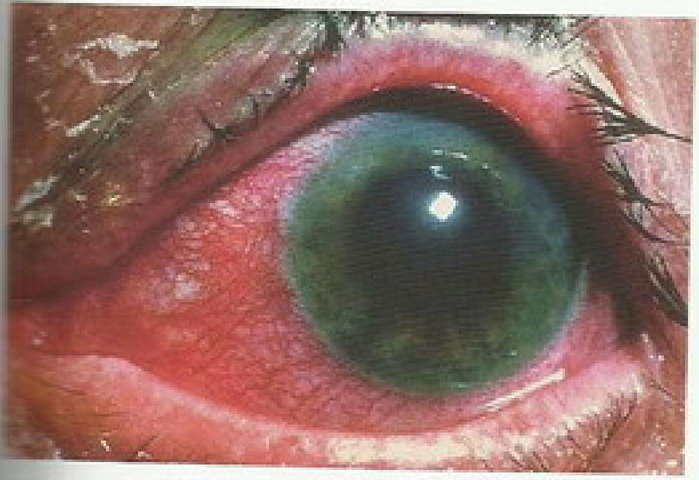
Goniotomy operation for congenital glaucoma


Cornea
Opening of Trabecular Meshwork
Trabeculotome
Iris

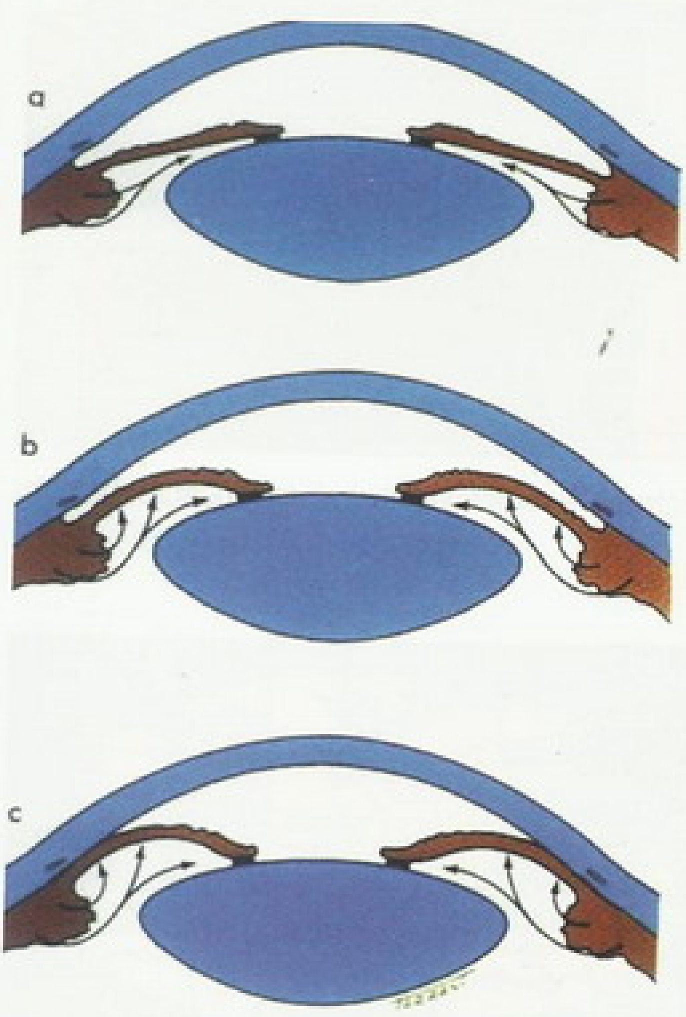
Trabeculotomy operation for congenital glaucoma



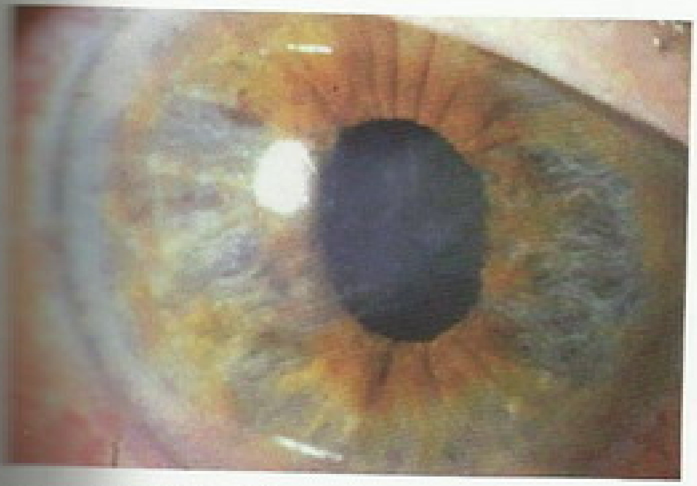
Right acute congestive glaucoma (note red eye and dilated pupil)



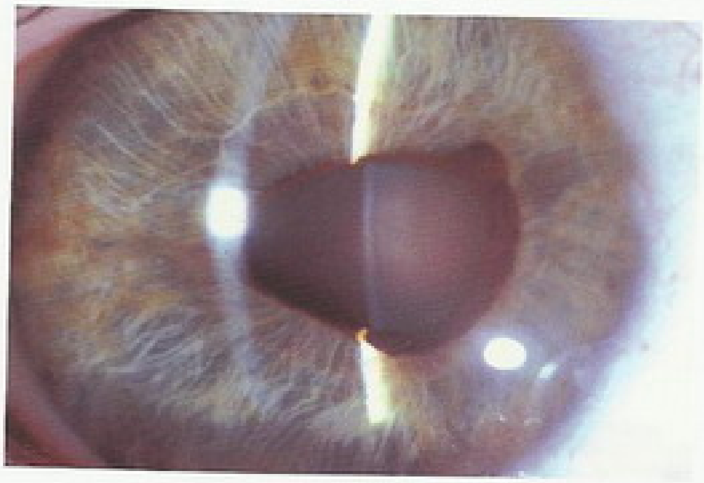
Right acute congestive glaucoma (note red eye and dilated pupil)



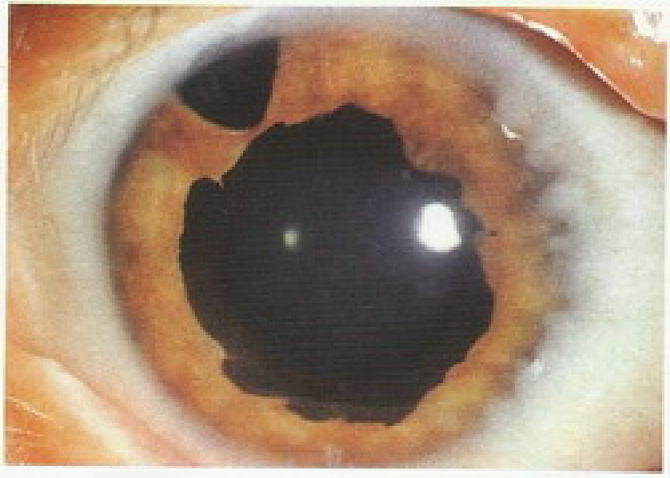
Mechanism of 1ry angle closure glaucoma



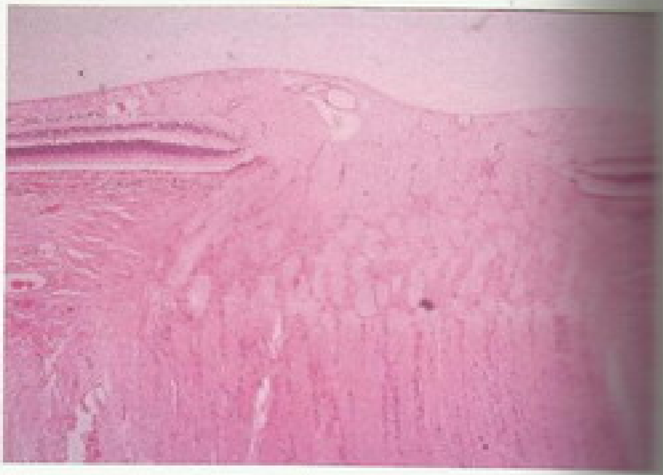
Vertically oval pupil in acute congestive glaucoma



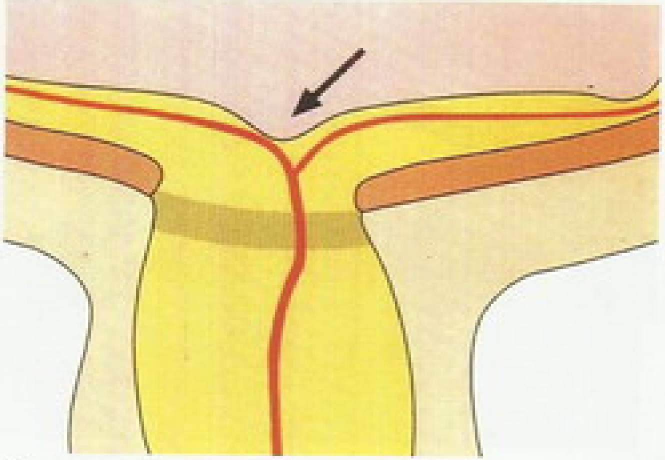
Ectropion uveae



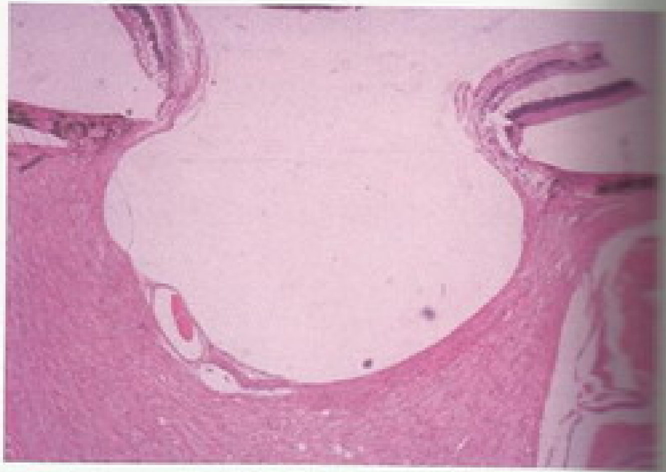
Ectropion uveae with peirpheral Iridectomy



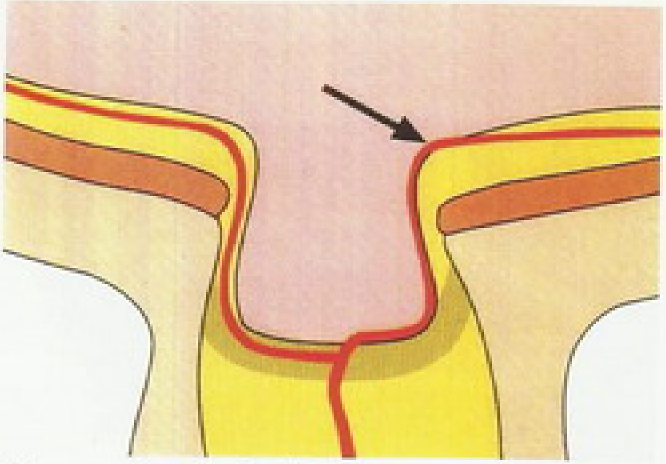
Histology of normal optic nerve & normal cup



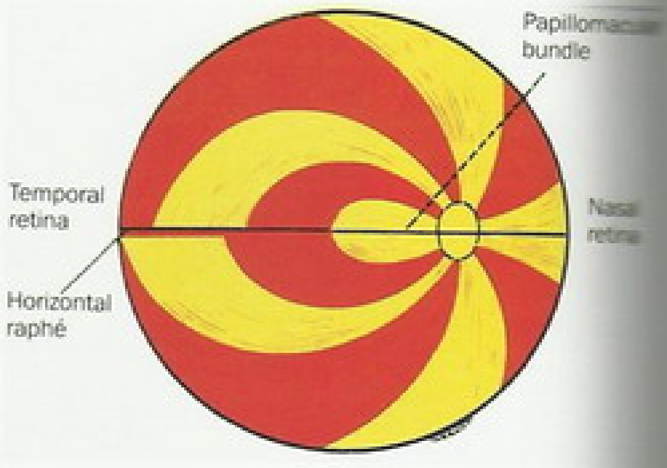
Normal optic disc



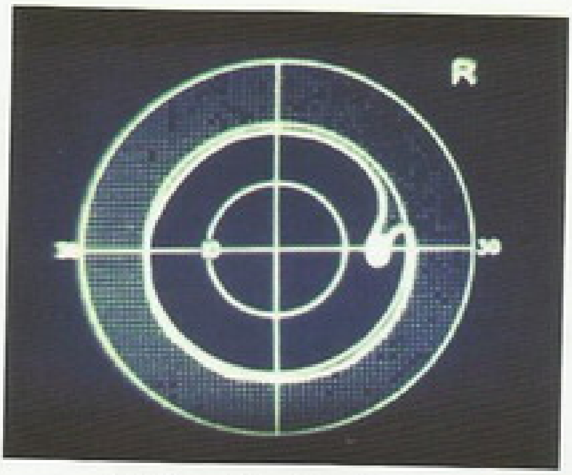
Histology of optic nerve show glaucomatous cupping



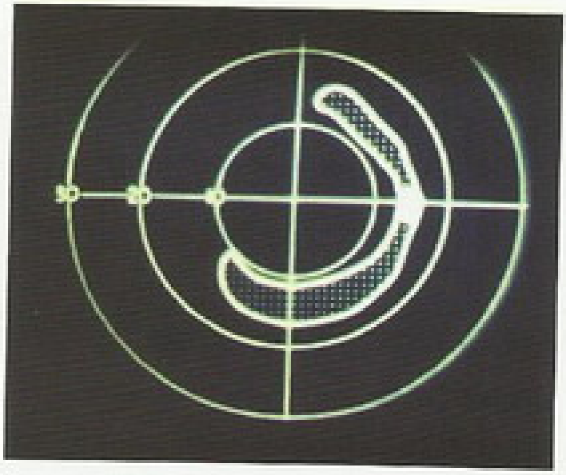
Glaucomatous optic disc


Papillomacu
bundle
Temporal retina
Nasal retina
Horizontal raphé

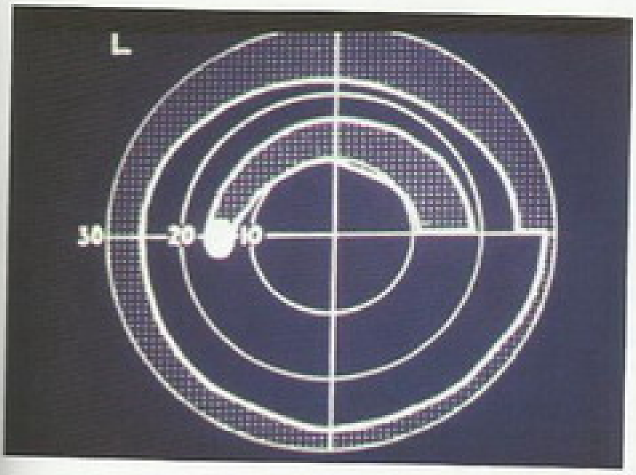
Arrangement of the nerve fibers of the retina



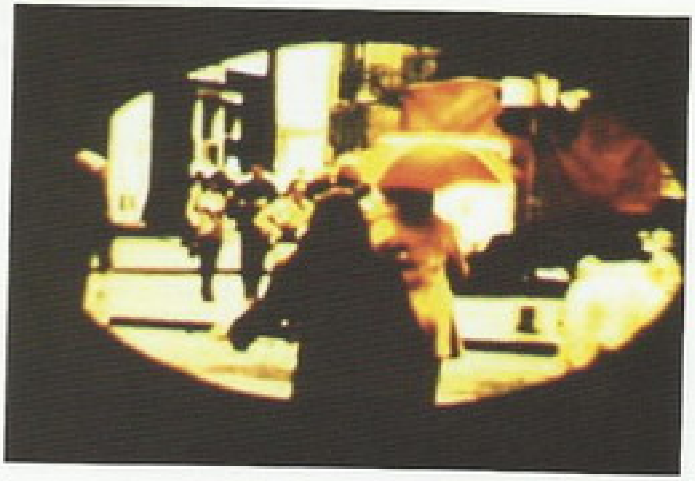
Baring of the blind spot



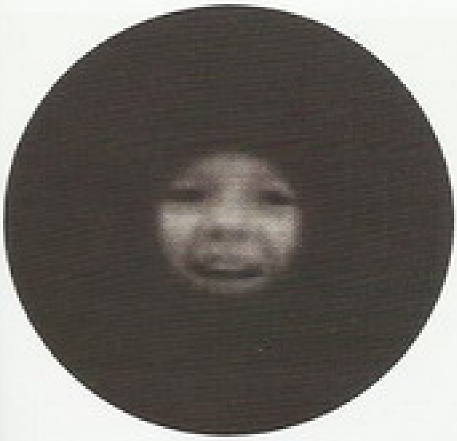
Seidle scotoma



Arcuate scotoma (note the Ronne step) .



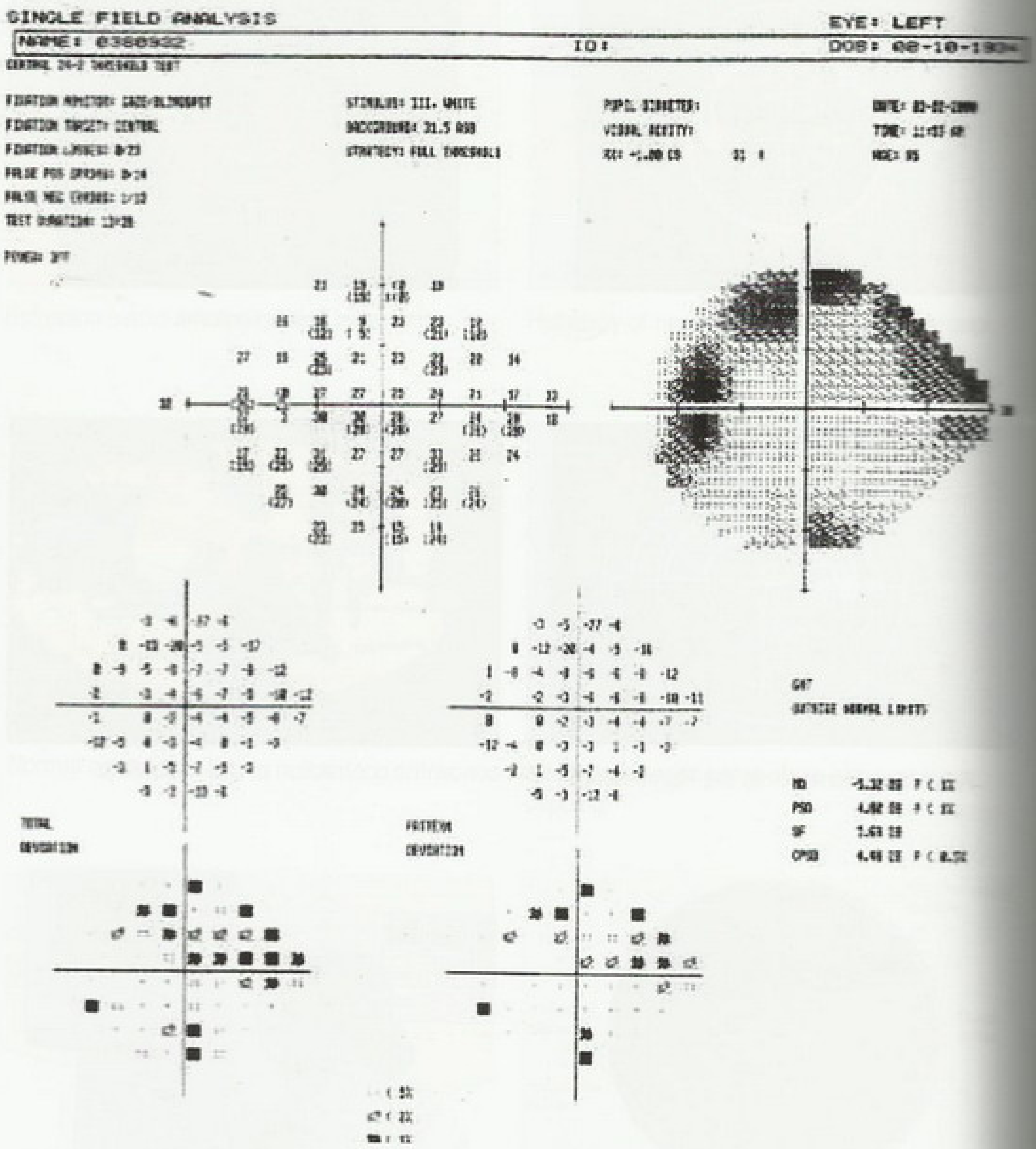
concentric contraction of the visual field



tubular field

12
7943
00
3162
10000
6
5
1
50

Humphery perimetry



SINGLE FIELD ANALYSIS

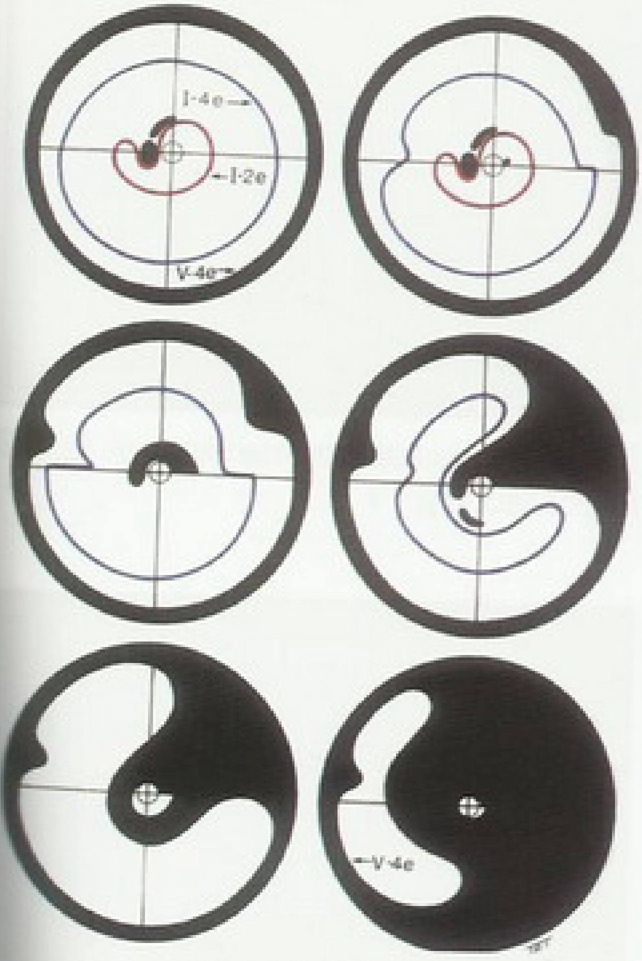
EYE: LEFT

NAME: 0380922

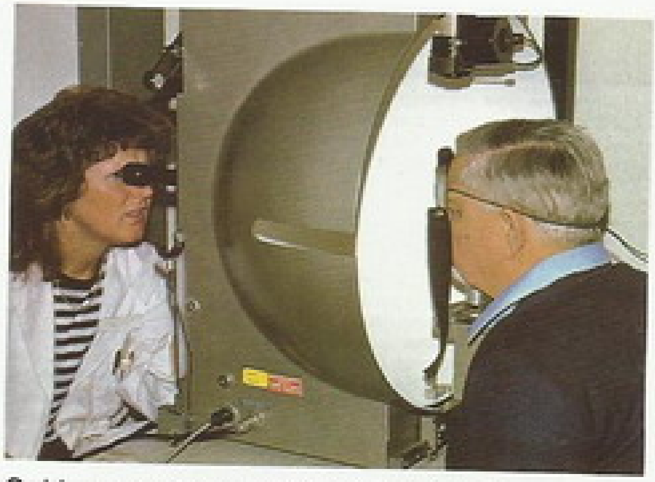
ID:

DOB: 08-10-19

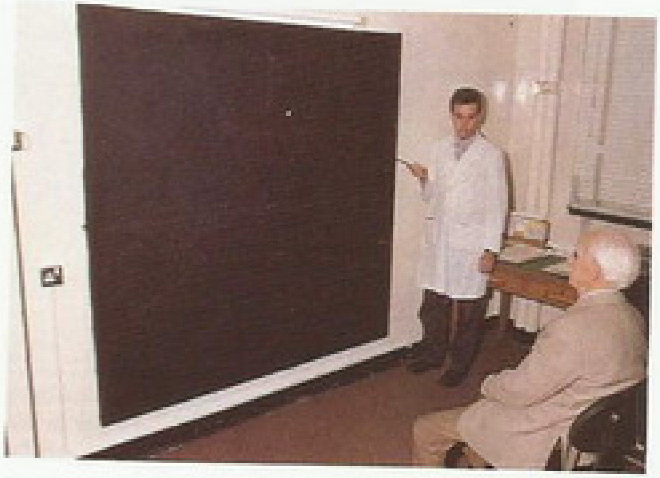
Humphery perimetry printout (showing arcute scotoma)



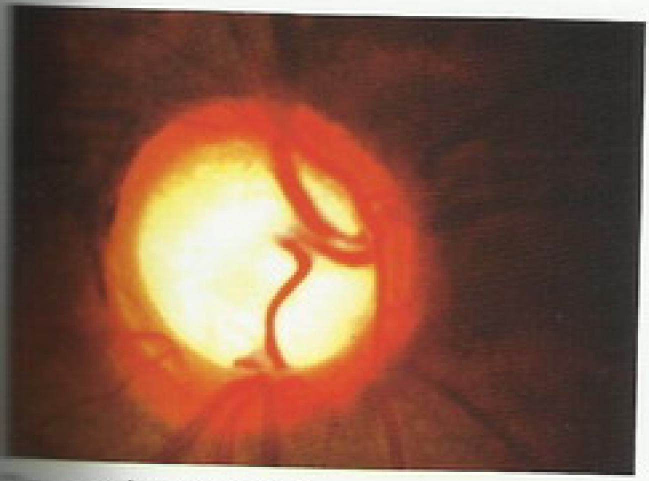
Progression of glaucomatous field changes



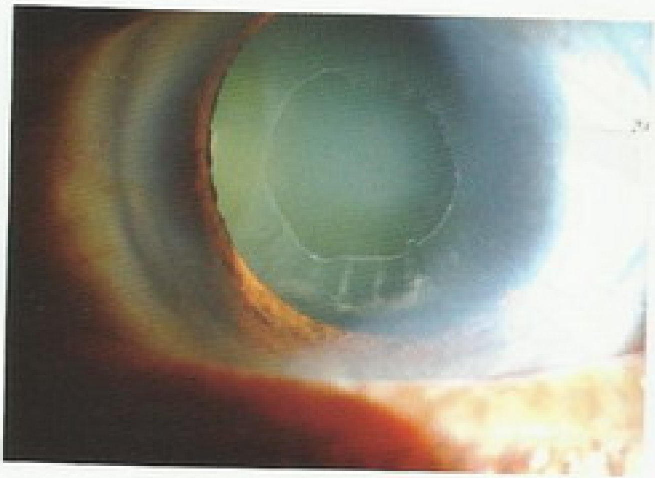
Goldman perimeter for examination of peripheral feild of vision



Bjerrum screen (campimetry) for testing the central feild of vision

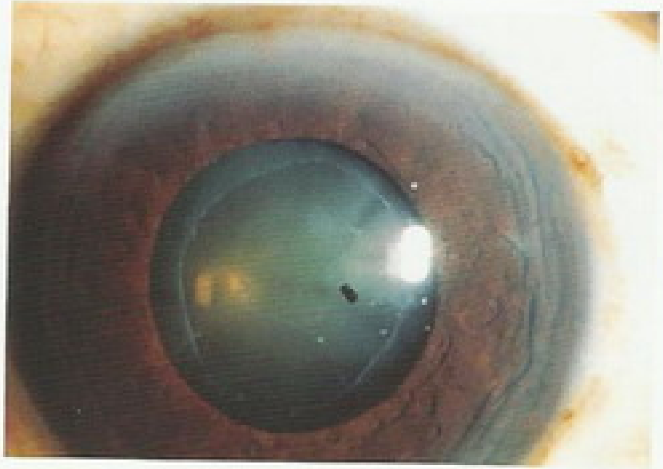


Glaucomatous cupping

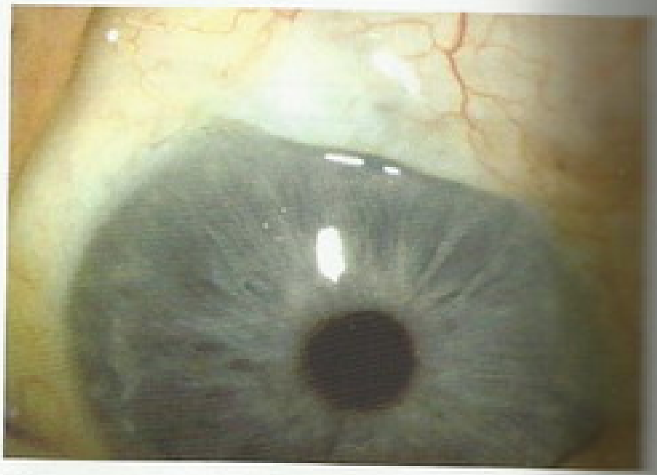


pseudo-exfoliation glaucoma

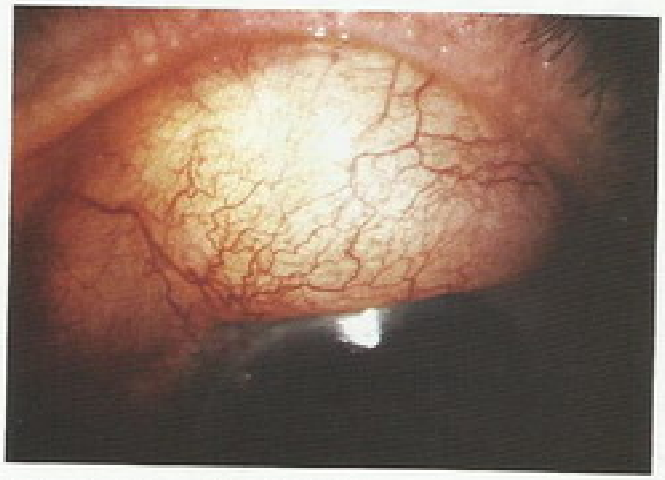
WhiteNightLove



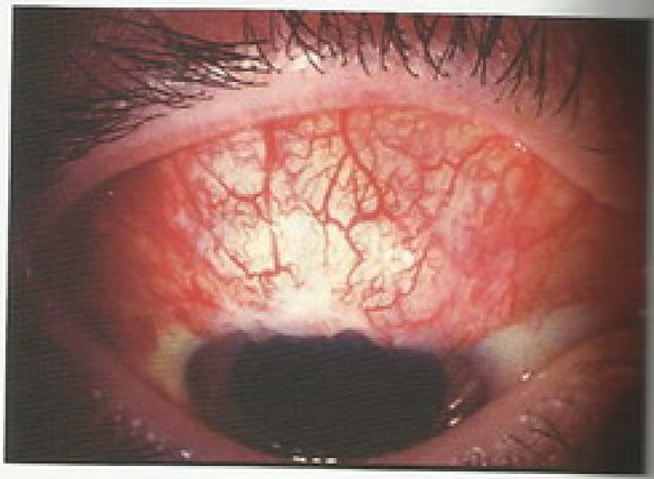
pseudo-exfoliation glaucoma



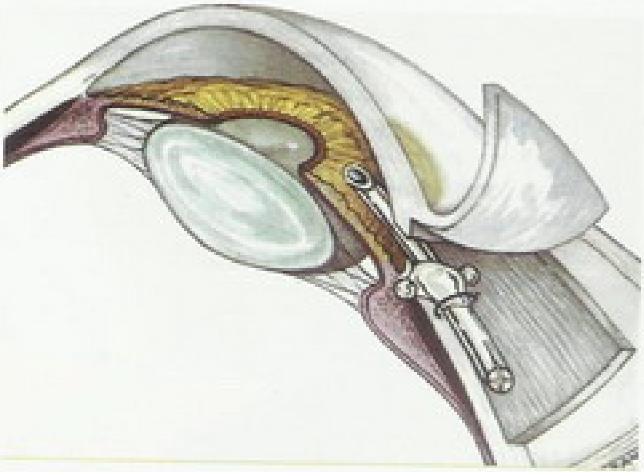
Bleb of external fistulising operation (trabeculectomy)



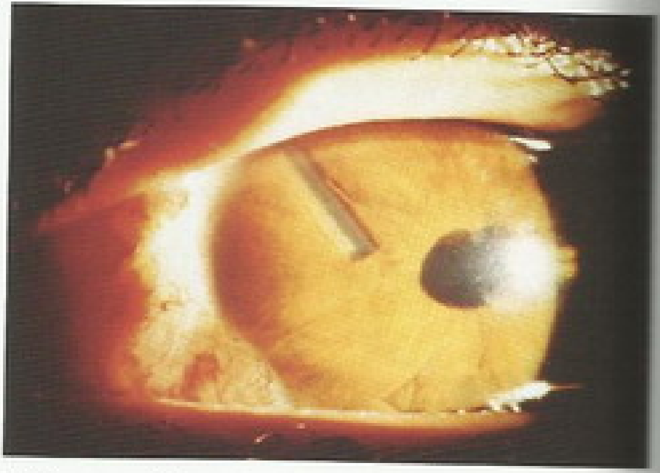
Extended (non-filtering) bleb



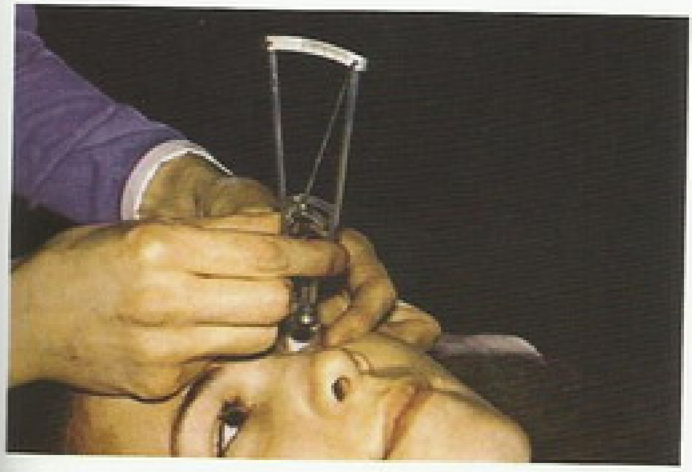
Vascularized (non-filtering) bleb



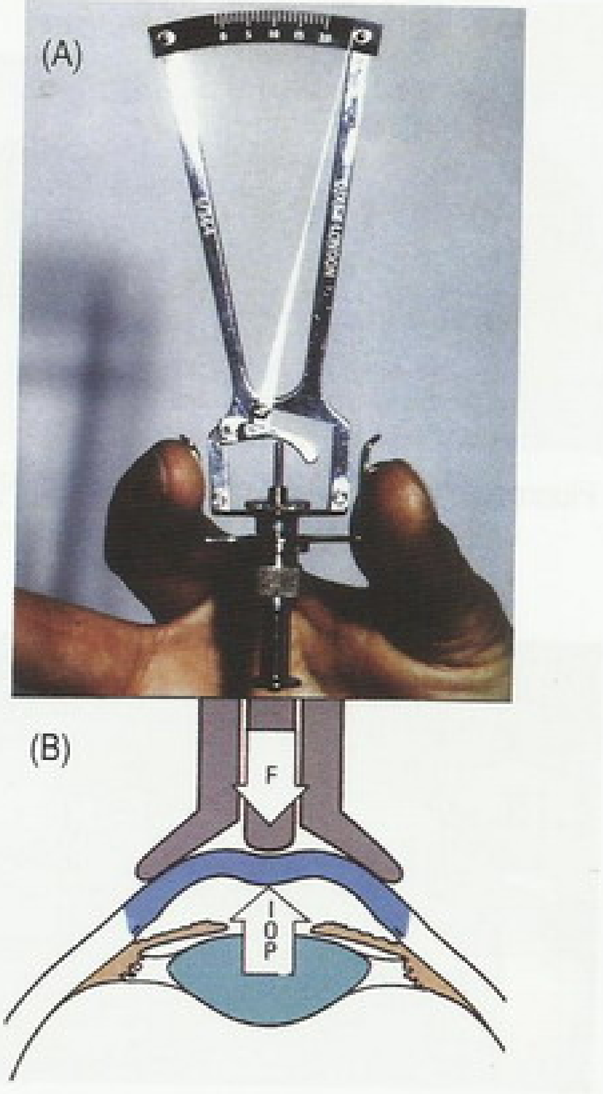
Molteno or Ahmed valve (implant)



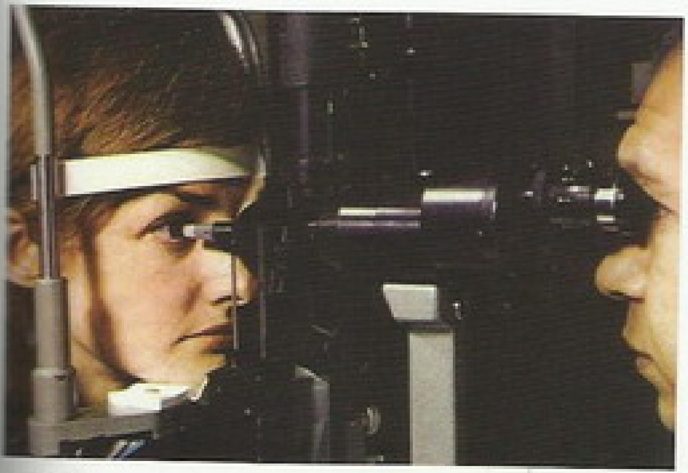
Molteno or Ahmed valve (implant)



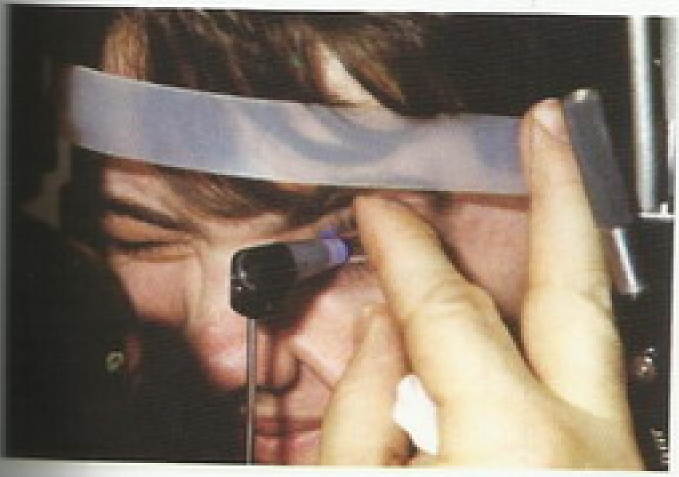
Schiotz (indentation) tonometer



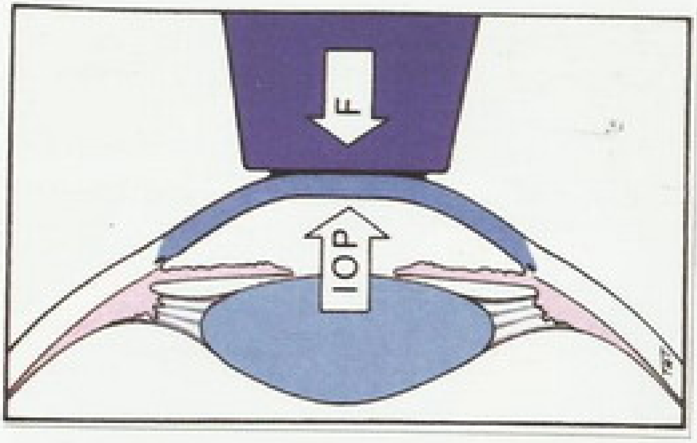
A. Schiotz (indentation) tonometer
B. Principles of indentation tonometer



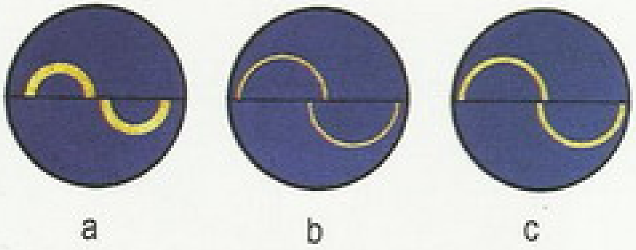
Goldman applanation tonometer



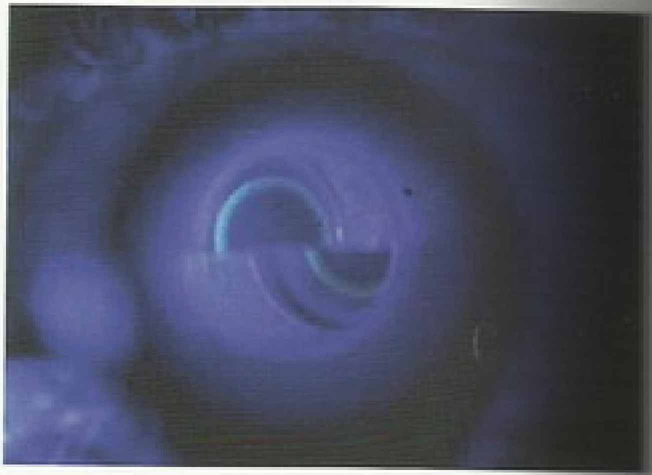
Goldman applanation tonometer (squeezing of the lids result in an inaccurate reading)



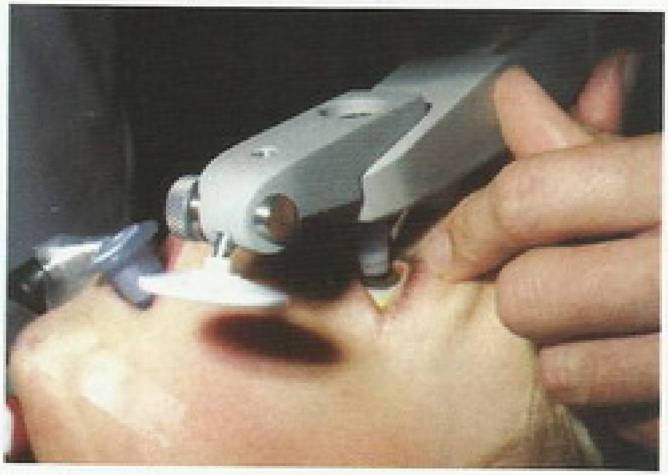
Principle of Goldman applanation tonometer



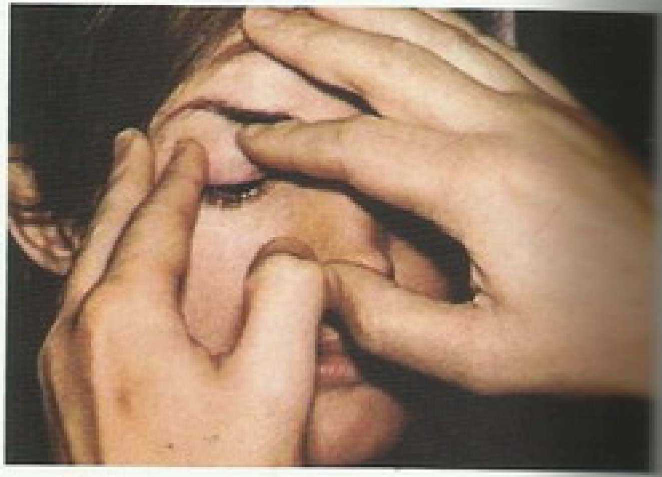
Fluorescein stained semicircles seen during tonometry (C is the right position)



Fluorescein stained semicircles seen during tonometry



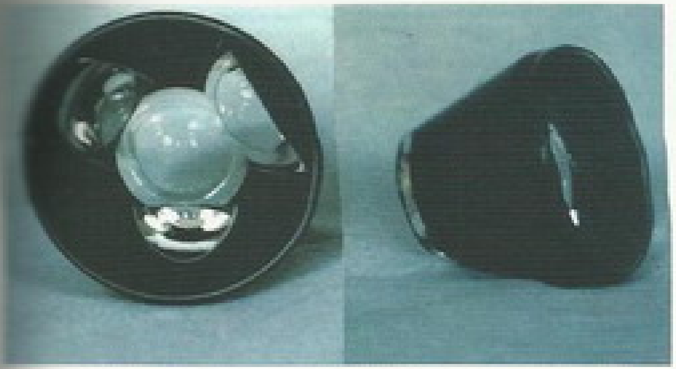
Hand applanation tonometer



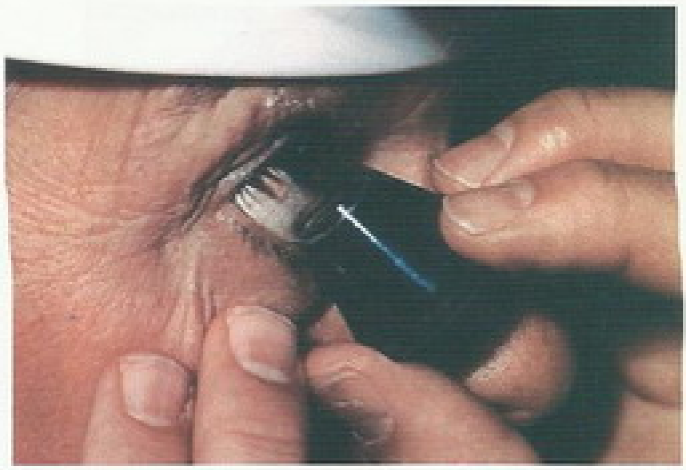
Measurement of IOP digitally

Tono-pen

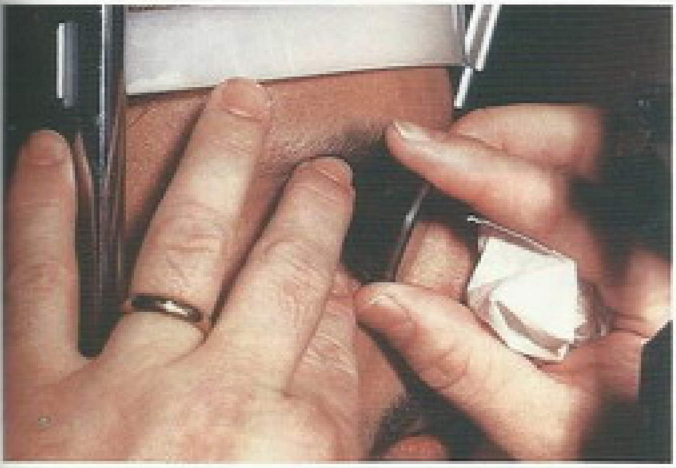
Air puff non-contact tonometer



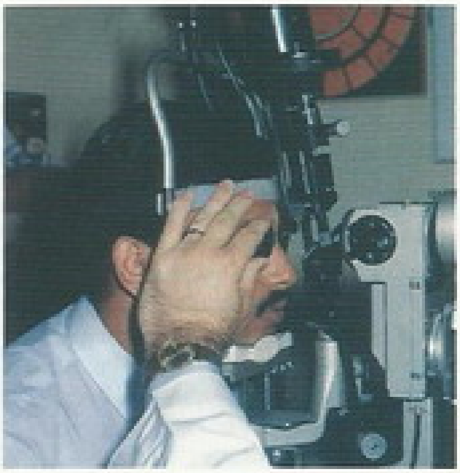
3-mirror Gonioscopy lens



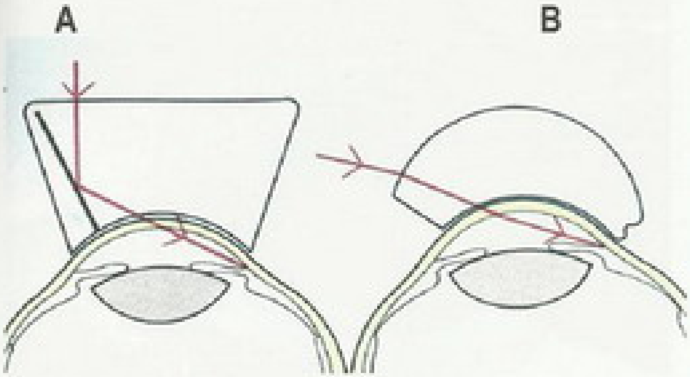
Insertion of 3-mirror gonioscopy lens



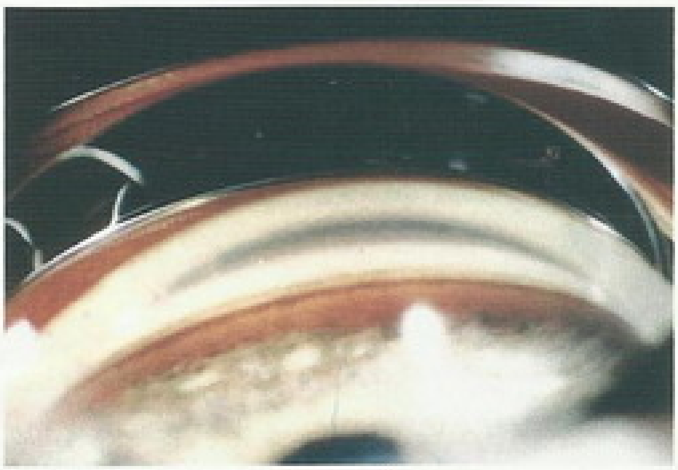
Insertion of 3-mirror gonioscopy lens



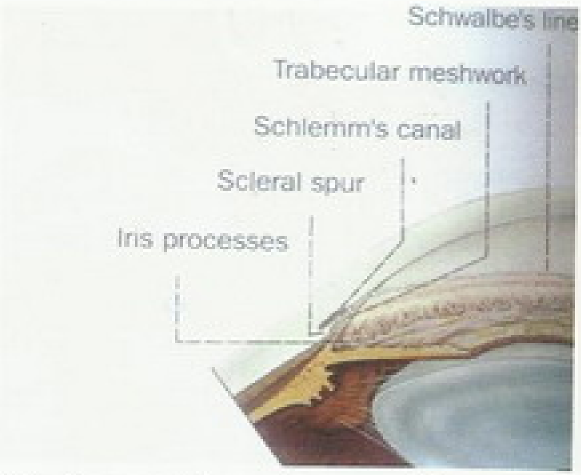
3- mirror Gonioscopy lens is used with slit lamp



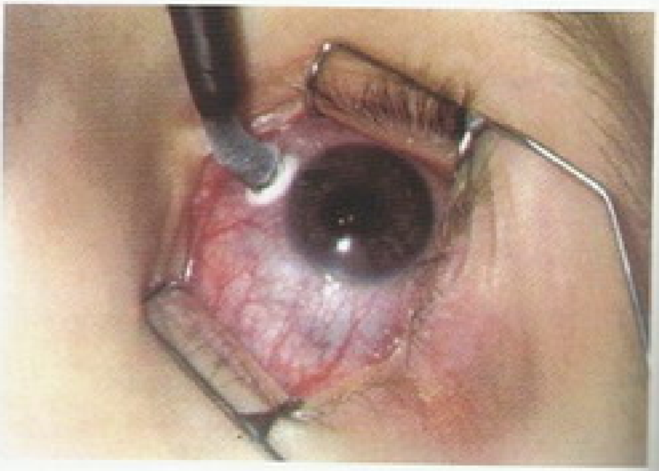
(a) princple of indirect gonioscopy
(Goldmann 3-mirror)
(b) principle of direct gonioscopy (Koeppe lens)



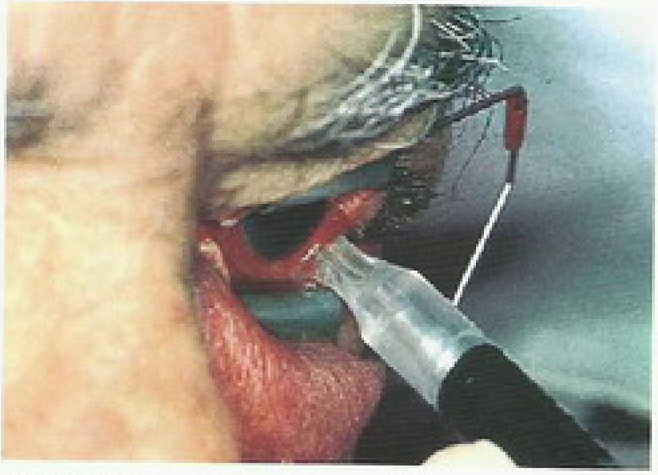
normal angel seen with 3-mirror Gonioscopy lens


Schwalbe's line
Trabecular meshwork
Schlemm's canal
Scleral spur
Iris processes

Structures of the angle seen with gonioscope

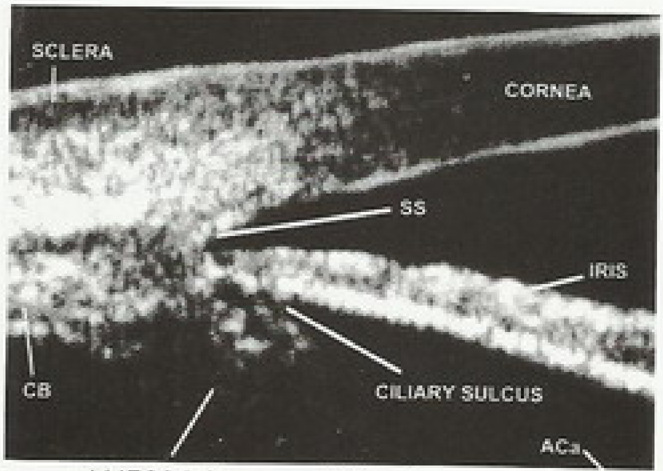


Cyclo-cryotherapy (partial desrtuction of C.B. by freezing)

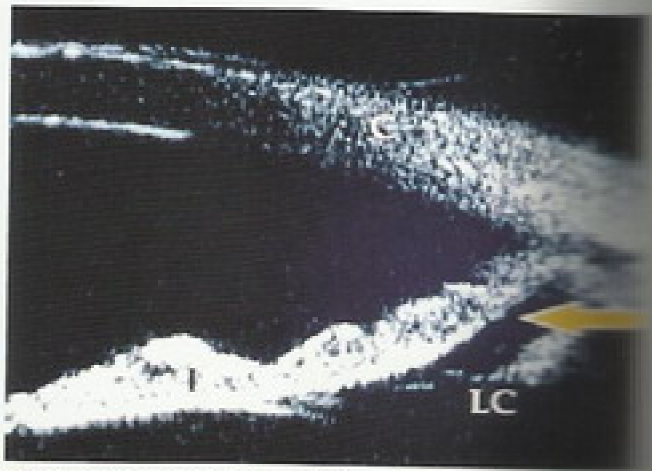


Diode laser cyclophotocoagulation

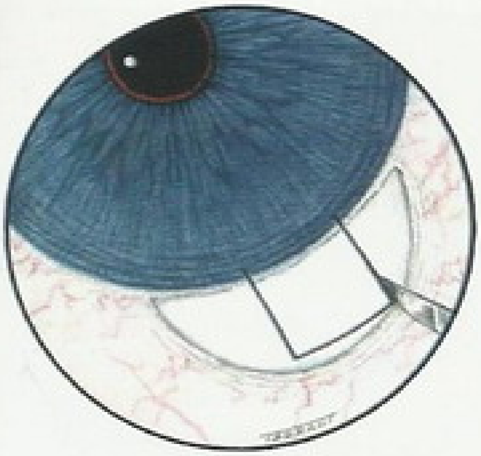
Confrontatiom test (crude method for testing the peripheral field)


SCLERA
CORNEA
SS
IRIS
CB
CILIARY SULCUS
ACa

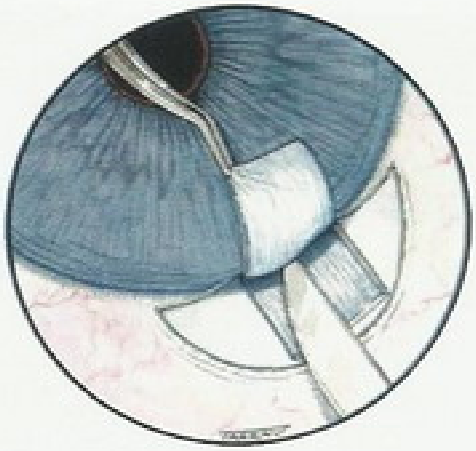
normal UBM (ultrasound biomicroscopy) of the ant. segment of the eye: its high frequency ultrasound, the high the frequency of ultrasound the low the penetration &the high the resolution.



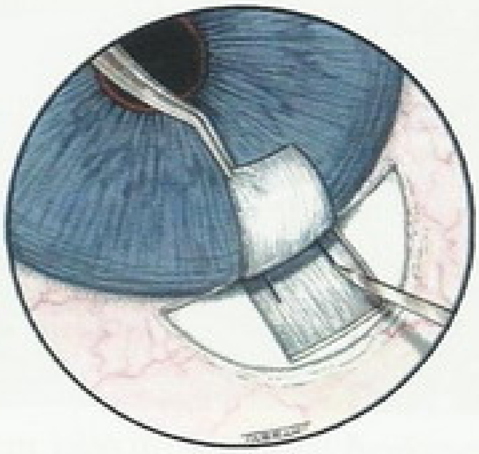
UBM showing backward bowing of the iris in case of pigment dispersion syndrome PDS



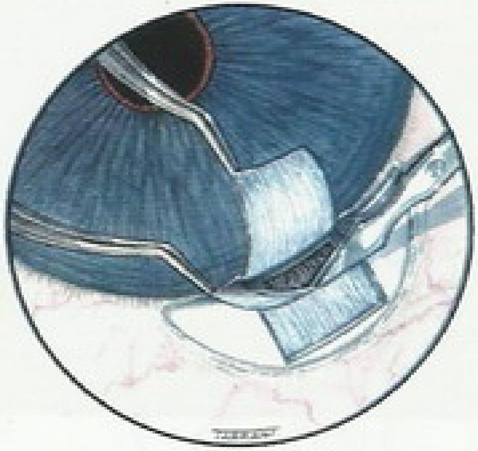
a) Outline of superficial scleral flap



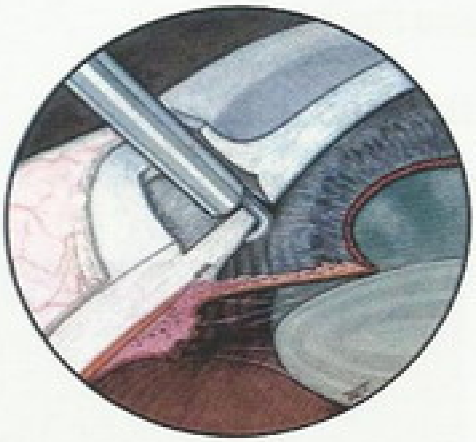
b) Dissection of superficial scleral flap



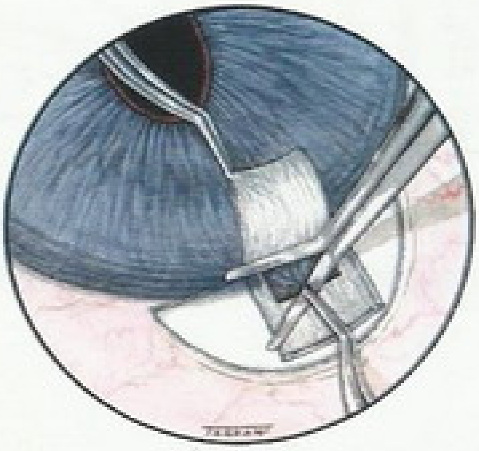
c) Incision for deep sclerectomy



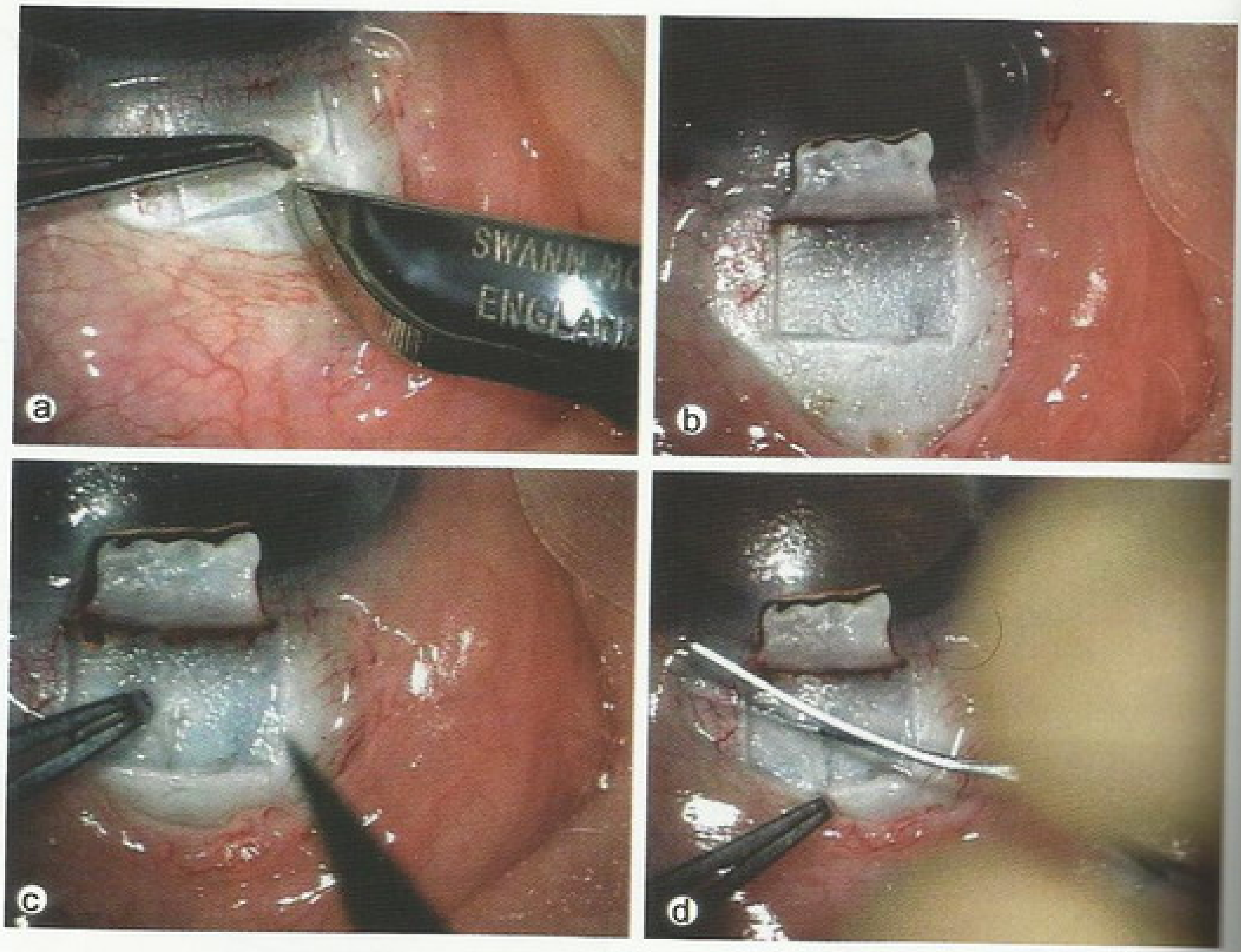
d) Excision of deep scleral flap with scissors



e) Excision of deep scleral tissue with a punch (alternative)



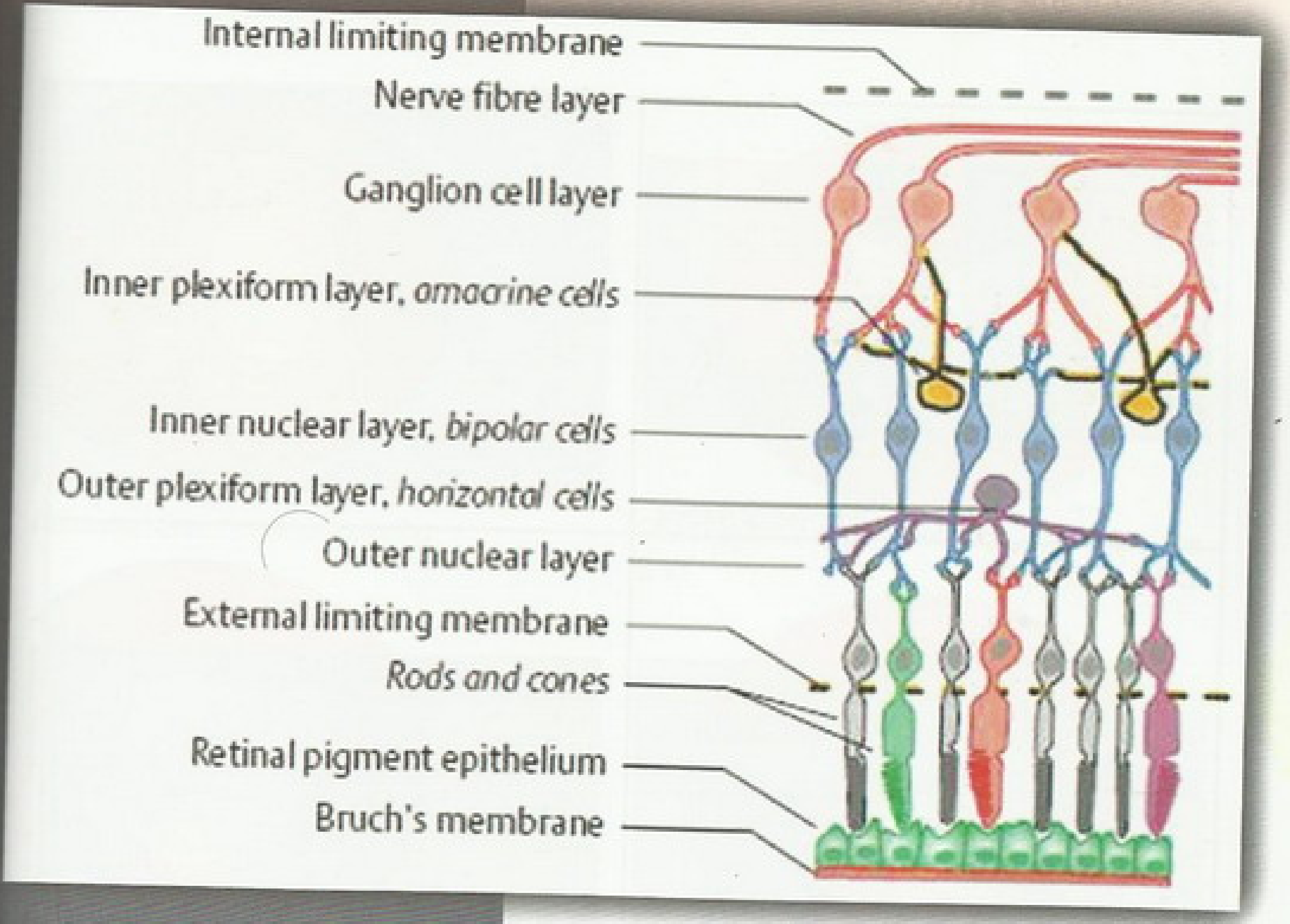
f) Peripheral iridectomy

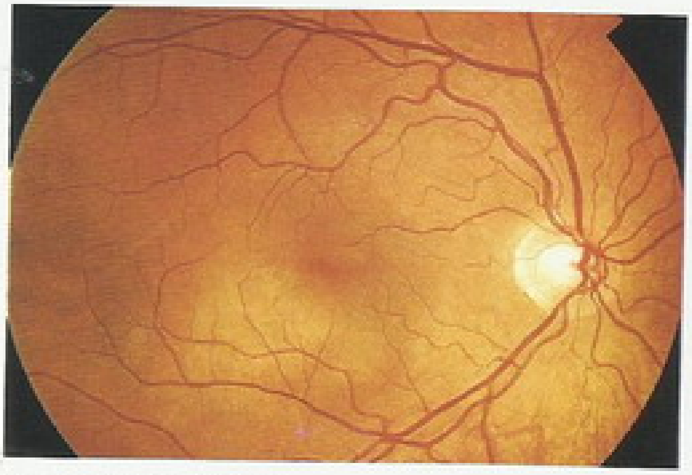

a
SWANN-MO
ENGLAND
b
c
d

Trabeculotomy operation for congenital glaucoma

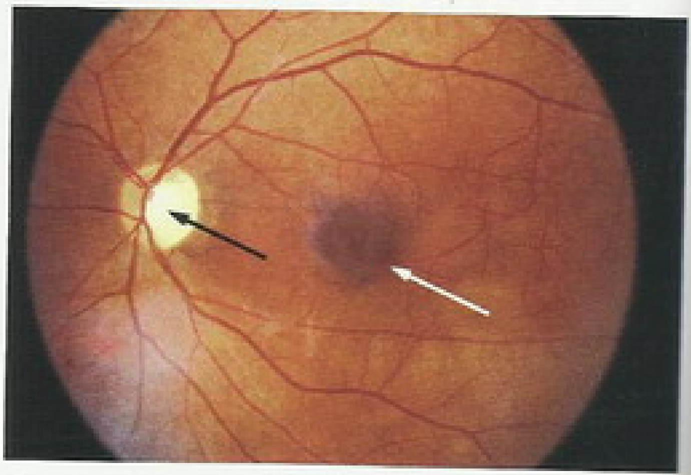
Chapter 10

Disorders of the Retina & Optic N.

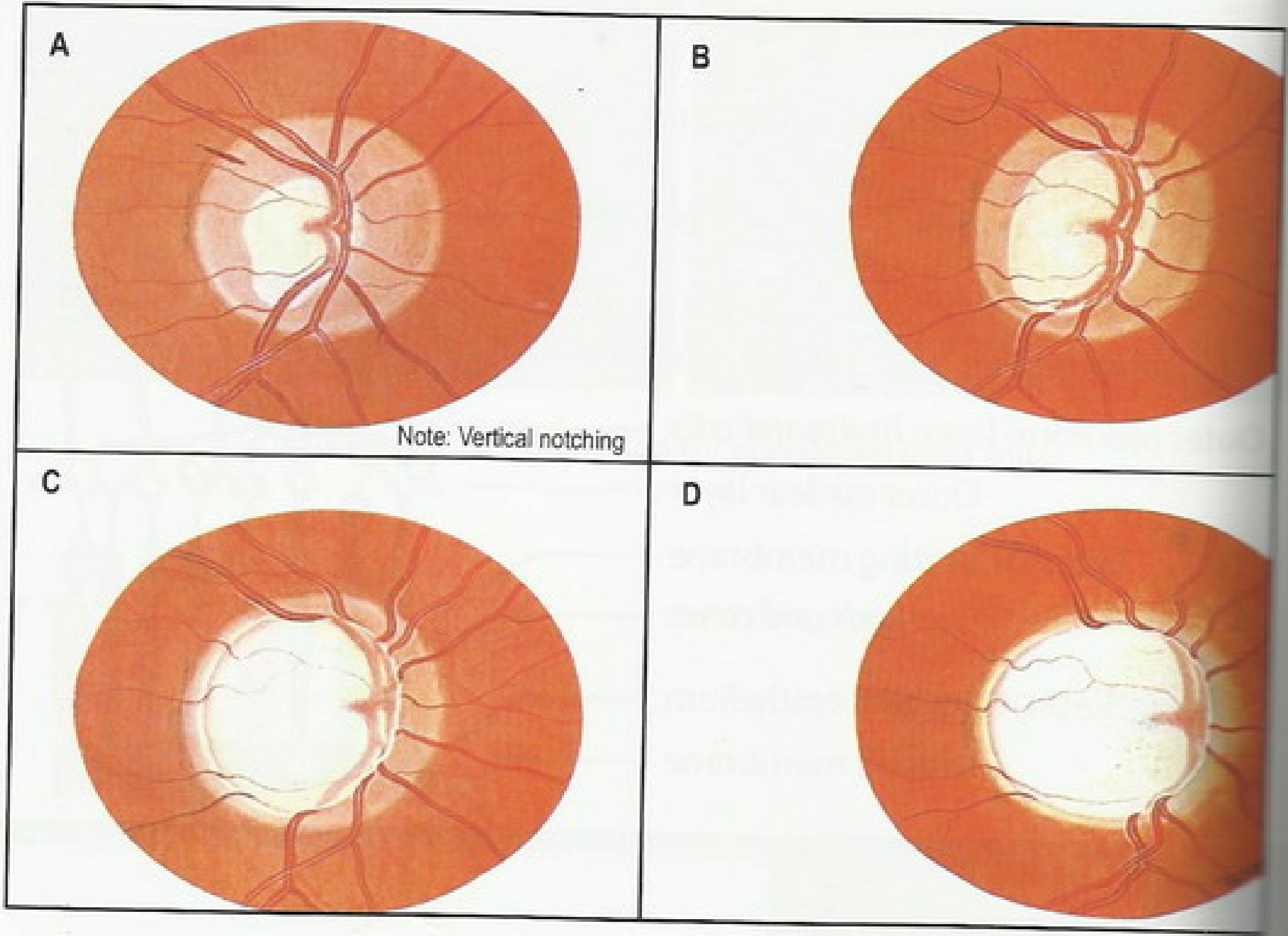

Internal limiting membrane
Nerve fibre layer
Ganglion cell layer
Inner plexiform layer, *amacrine cells*
Inner nuclear layer, *bipolar cells*
Outer plexiform layer, *horizontal cells*
Outer nuclear layer
External limiting membrane
Rods and cones
Retinal pigment epithelium
Bruch's membrane



Normal right fundus

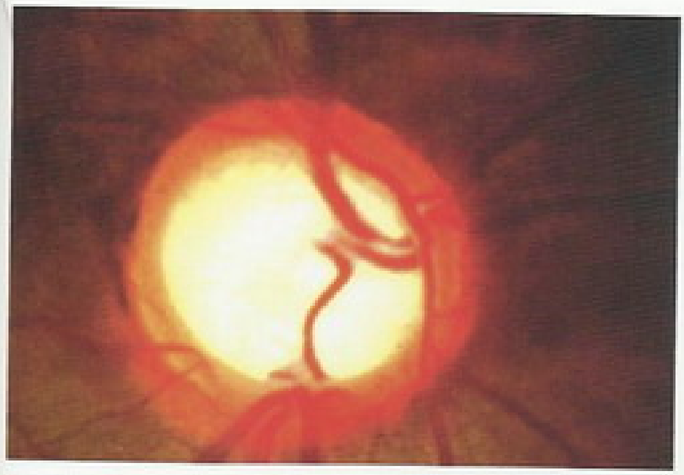


Normal left fundus

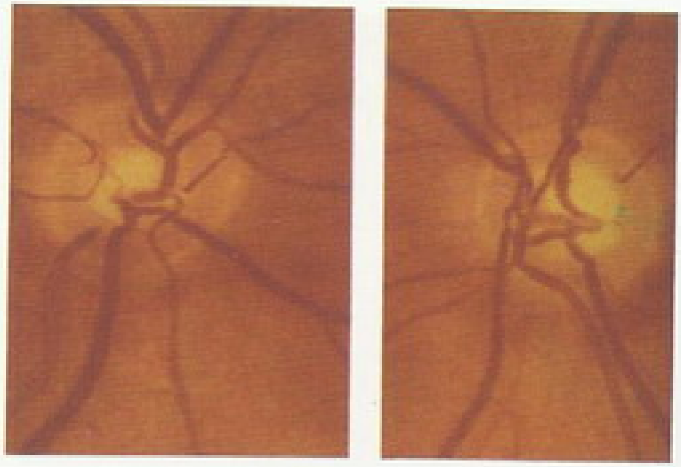


Note: Vertical notching

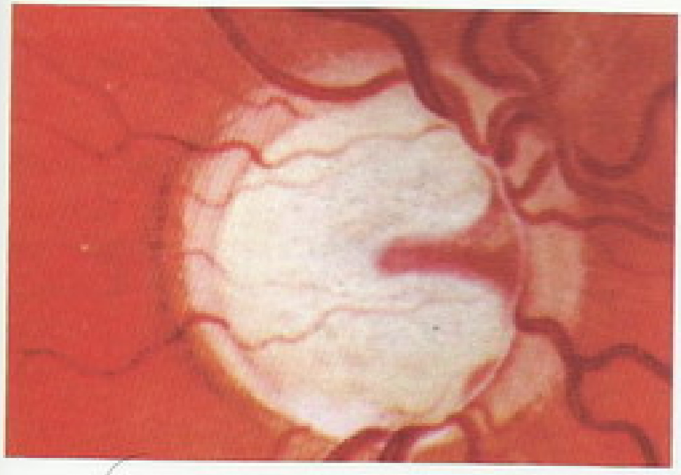
Progression of glaucomatous cupping



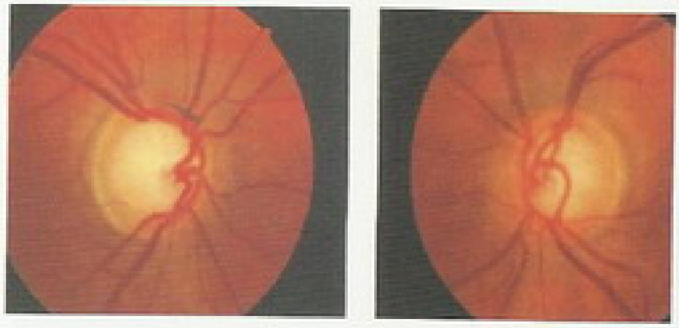
Advanced Glaucomatous cupping



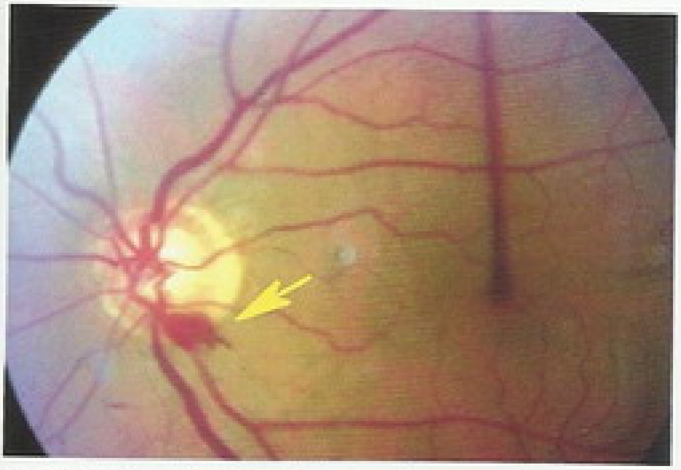
Assymetrical cup(indicates early glaucoma)



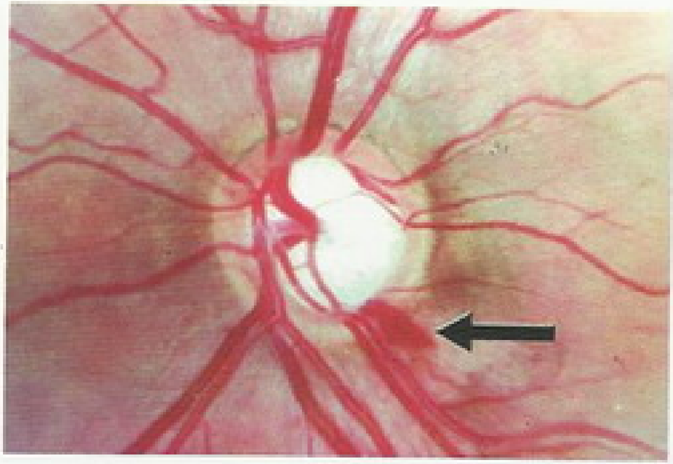
Advanced Glaucomatous cupping



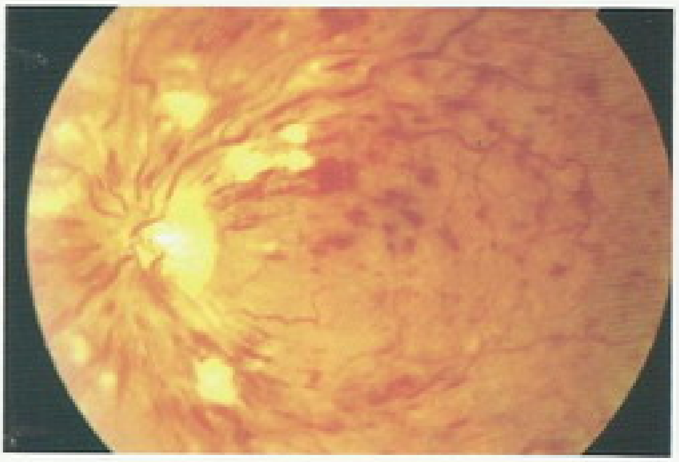
Glaucomatous cupping with nasal shifting of the B.Vs.



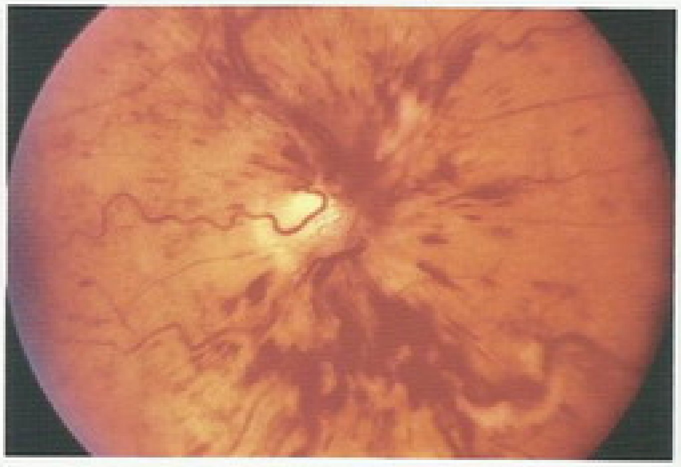
Splinter Hge (early glaucoma)



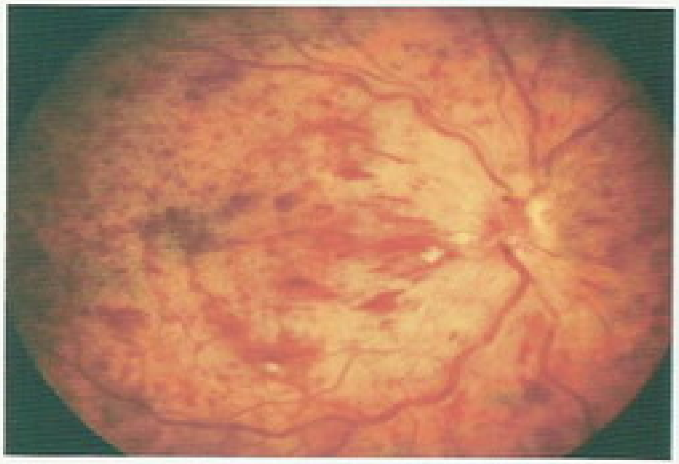
Splinter Hge (early glaucoma)



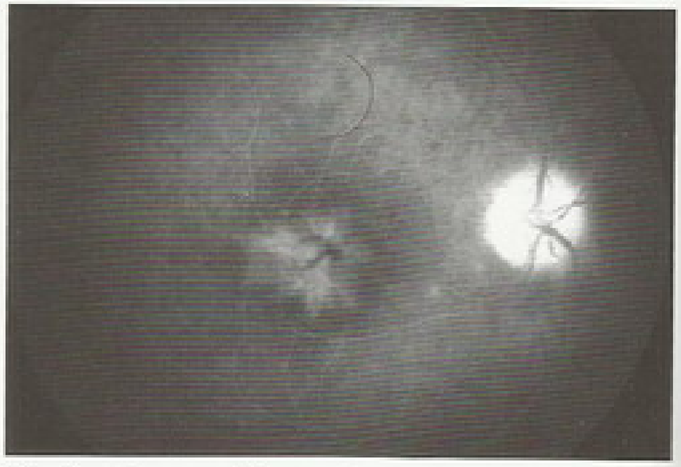
Central Retinal Vein Occlusion (CRVO)
(stormy sunset appearance)



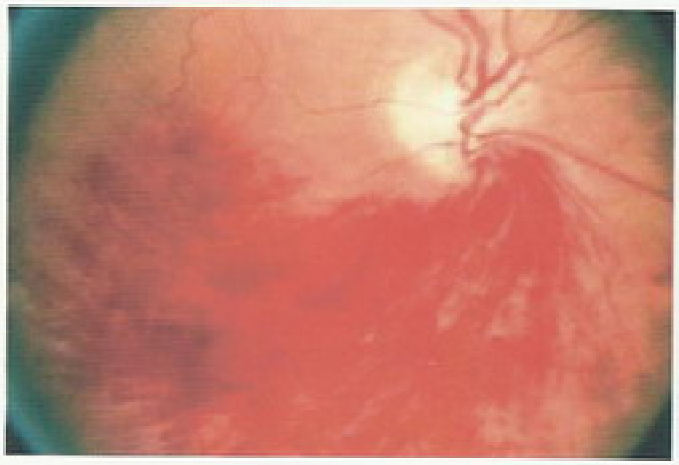
CRVO



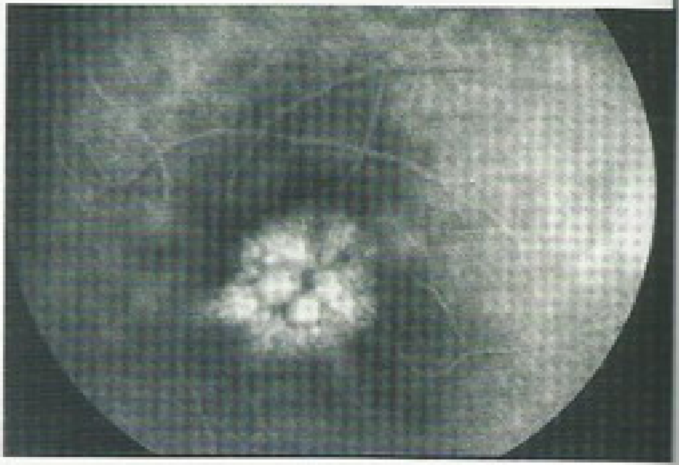
CRVO



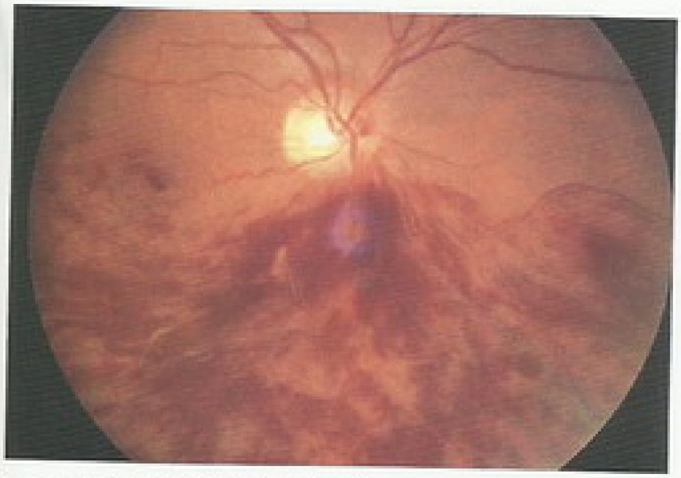
FA showing cystoid macular oedema



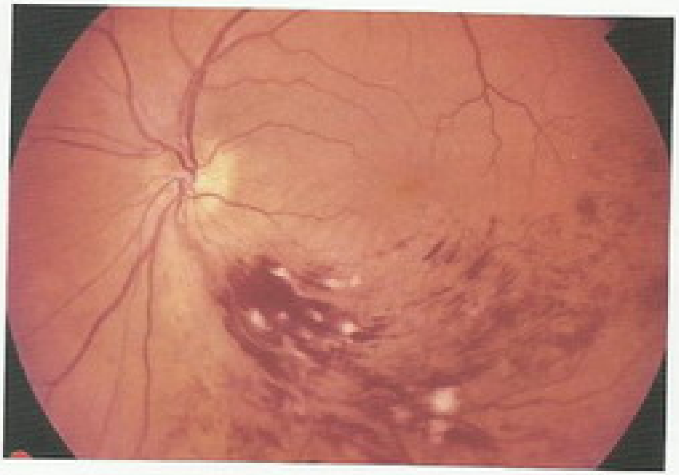
Inferior Branch vein occlusion



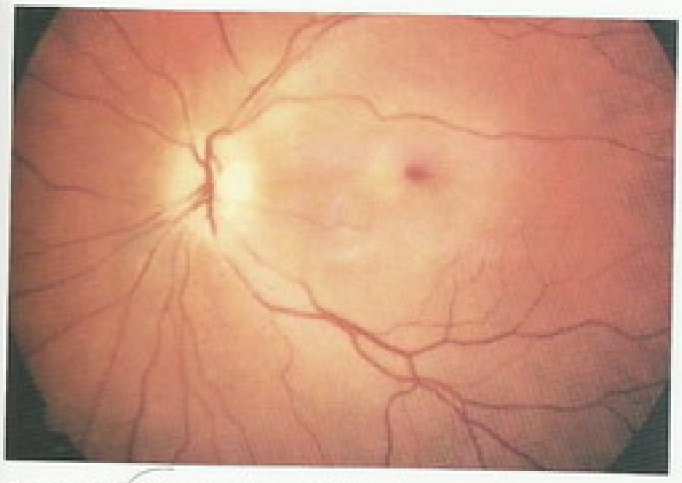
FA showing cystoid macular oedema



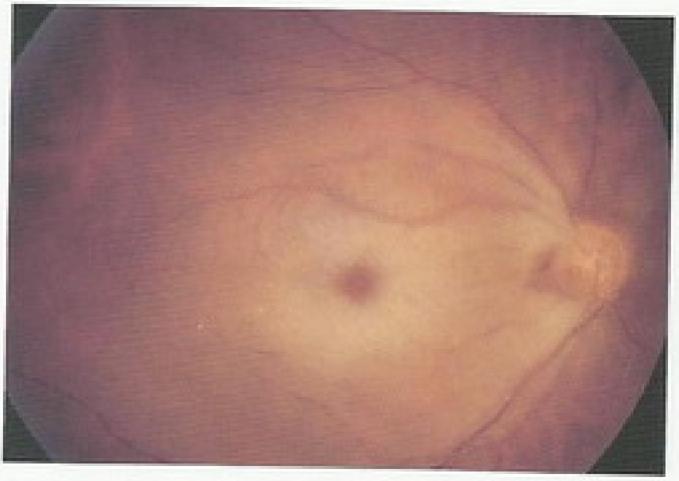
Inferior Branch vein occlusion



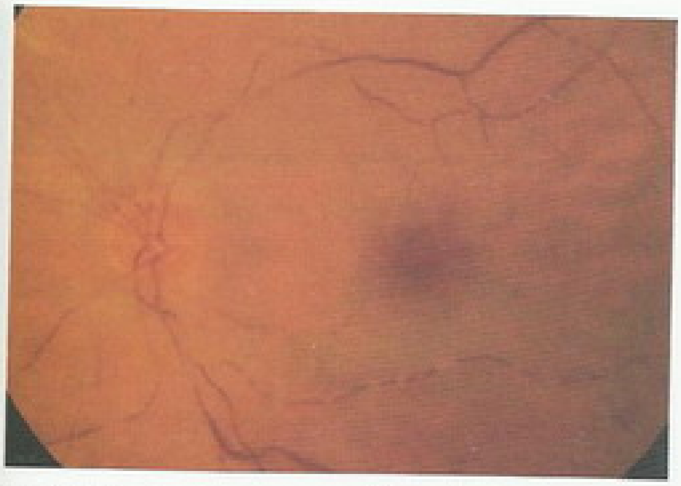
Infero-temporal Branch vein occlusion



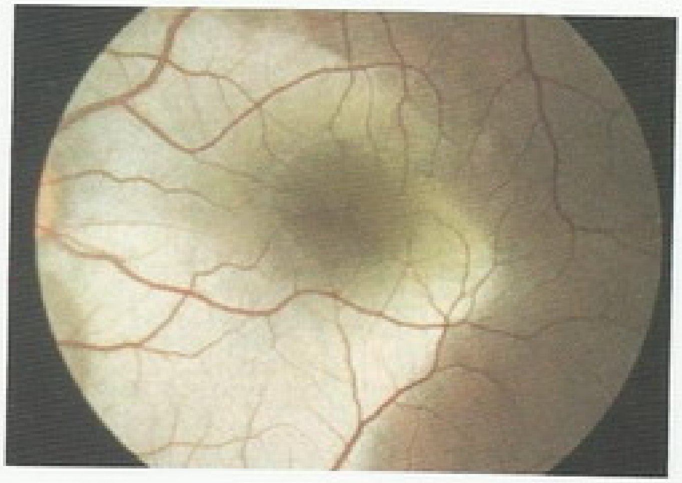
Central Retinal artery Occlusion CRAO (note the Cherry-red spot)



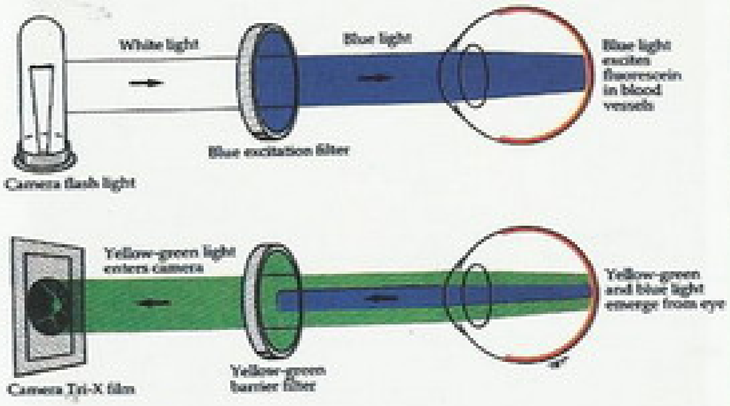
CRAO



Cattle truck appearance or blood column segmentation in a case of CRAO

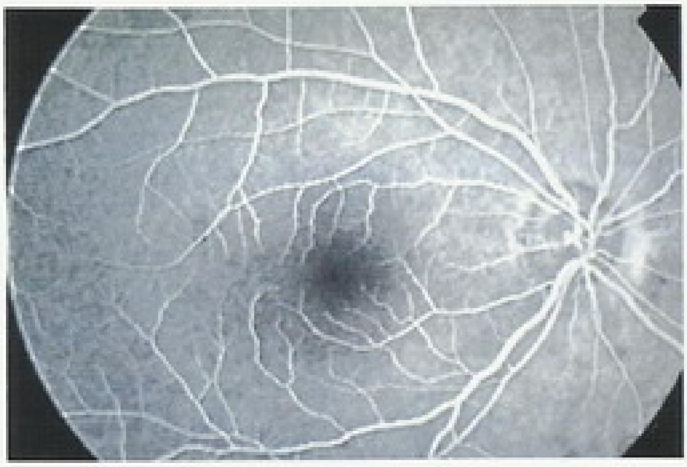


Commotio retinae(retinal oedema & cherry red spot following blunt trauma of the eye)

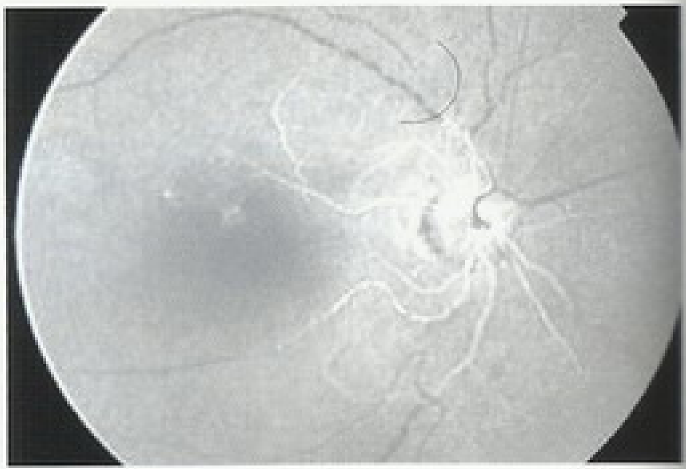

White light
Blue light
Blue light excites fluorescein in blood vessels
Blue excitation filter
Camera flash light
Yellow-green light enters camera
Yellow-green and blue light emerge from eye
Camera Tri-X film
Yellow-green barrier filter

Flourescein angio-graphy principle

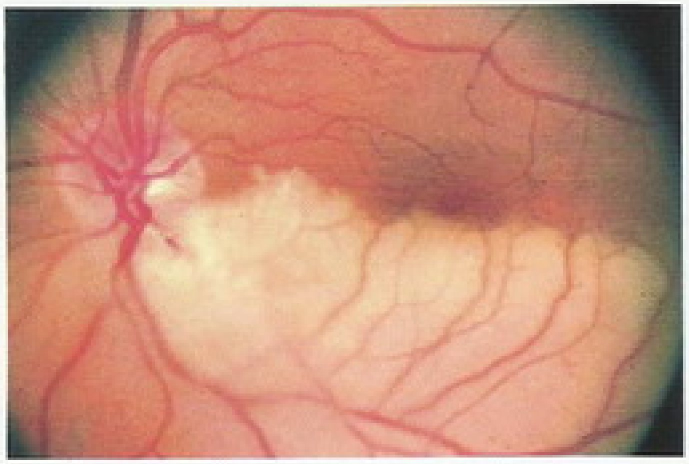
Flourescein angio-graphy fundus camera



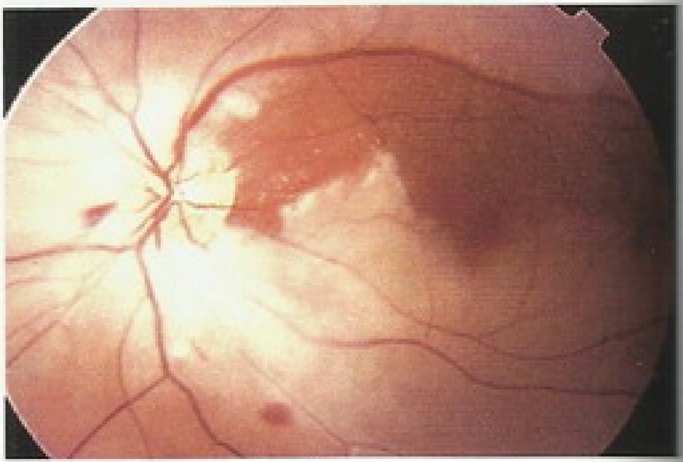
Normal flourescein angio-graphy (the macula appears black as it is avscular)



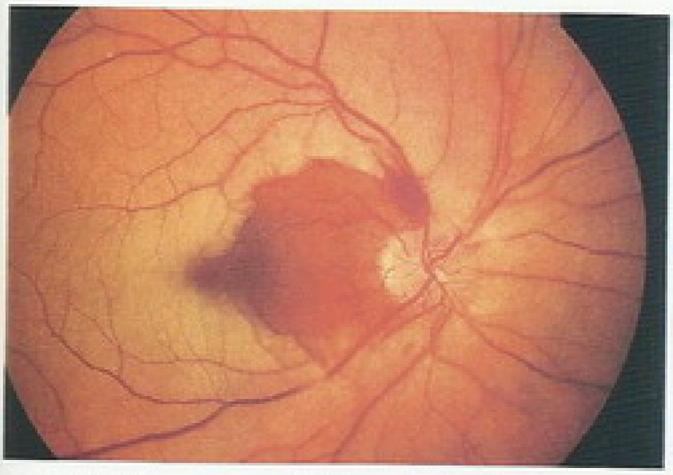
FA of CRAO (note the vessels are not filled completely)



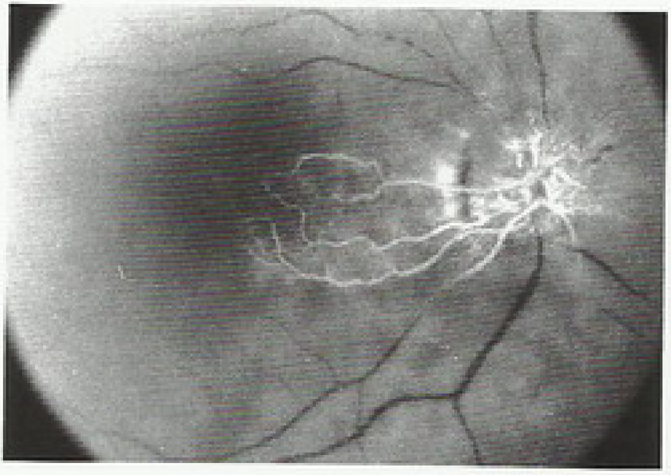
Lower Branch artery occlusion



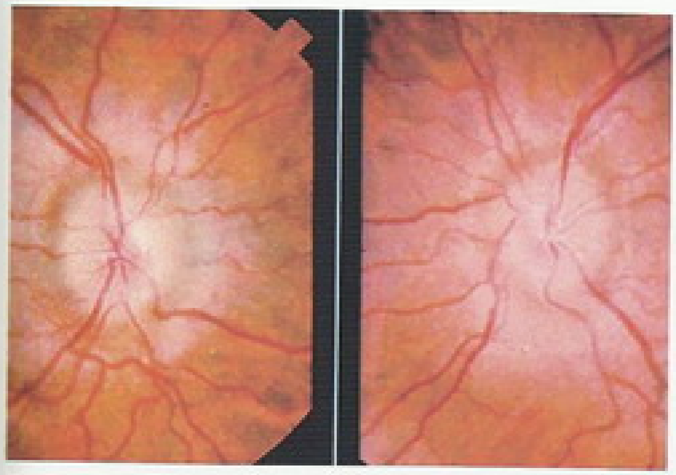
CRAO with preserved cilio-retinal artery



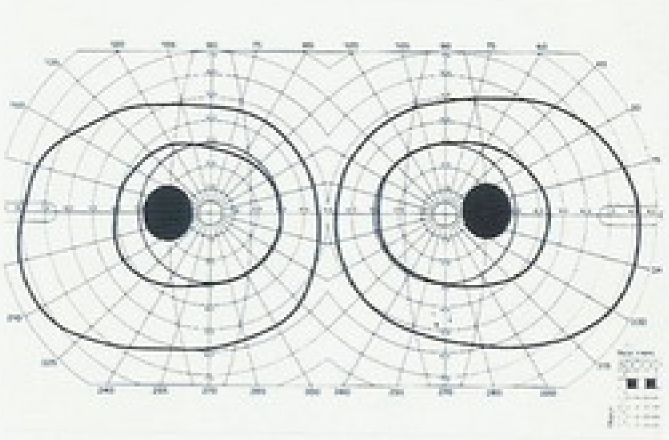
CRAO with preserved cilio-retinal artery



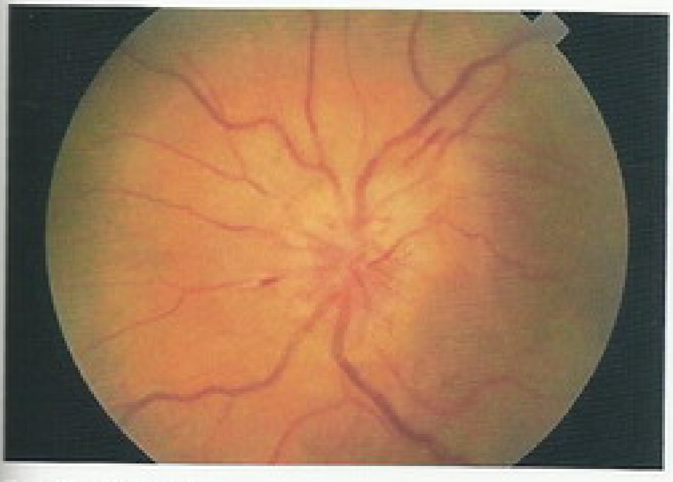
Fluorescein angiography of
CRAO with preserved cilio-retinal artery
showing perfusion only of the macula



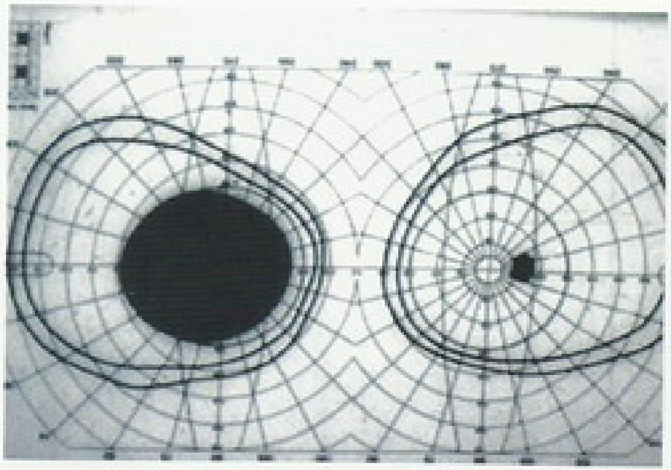
Bilateral papilloedema



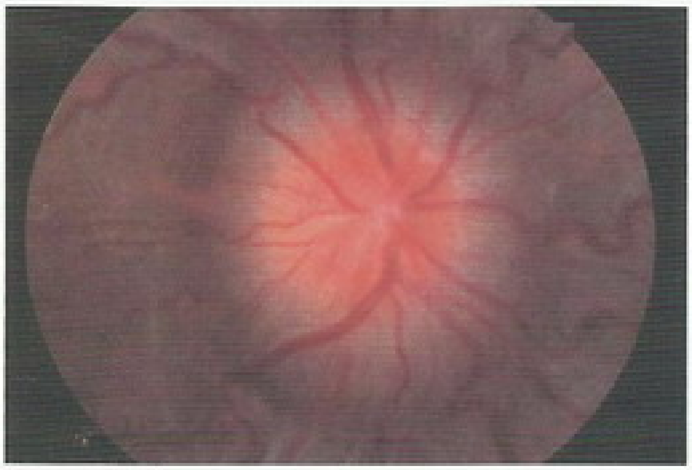
Bilateral enlargement of the blind spot in advanced papilloedema



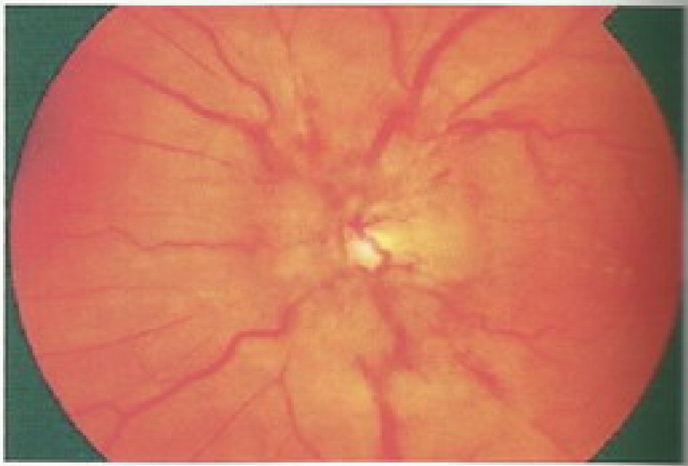
Papilloedema



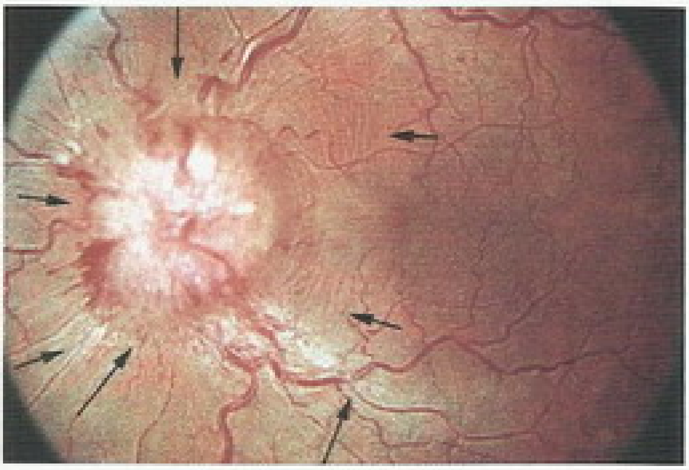
unilateral enlargement of the blind spot in papillitis



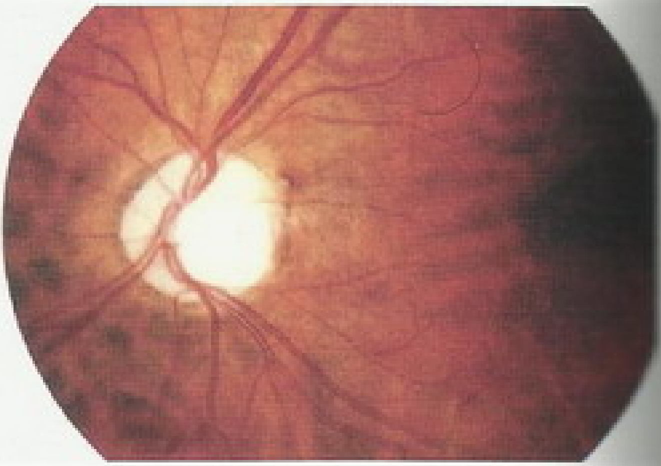
Papilloedema



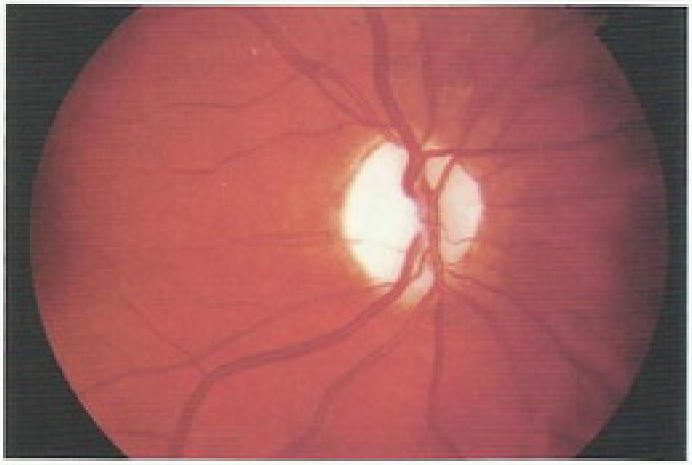
Papilloedema



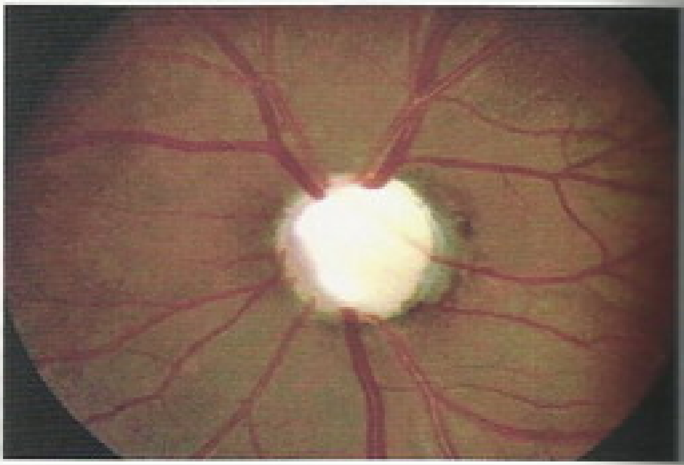
Papilloedema



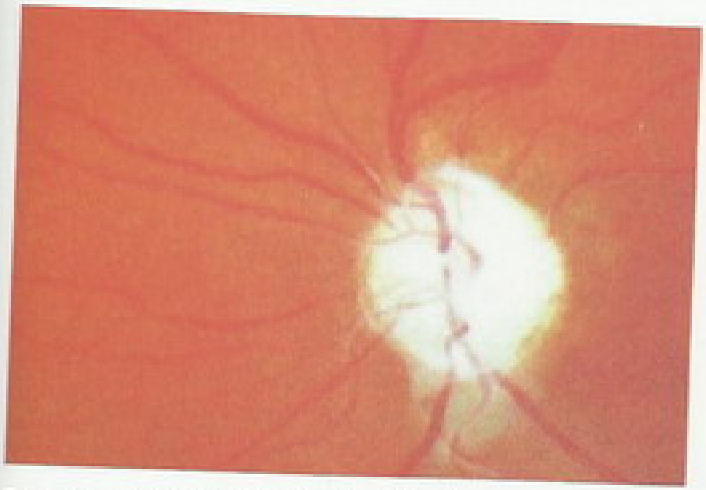
1ry optic atrophy (B.V normal)



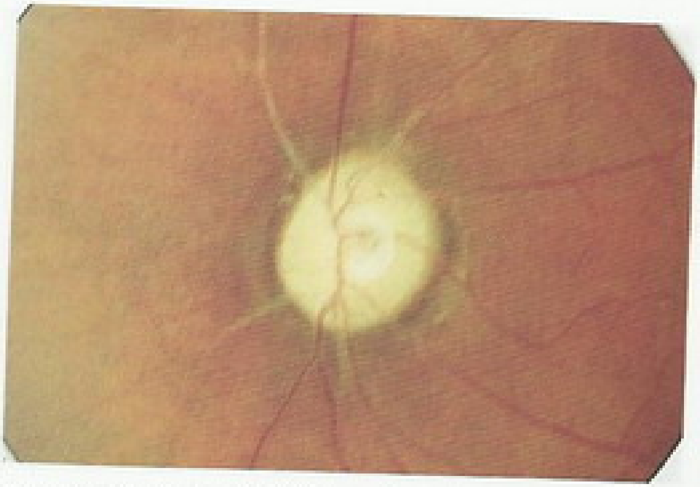
1ry optic atrophy (B.V normal)



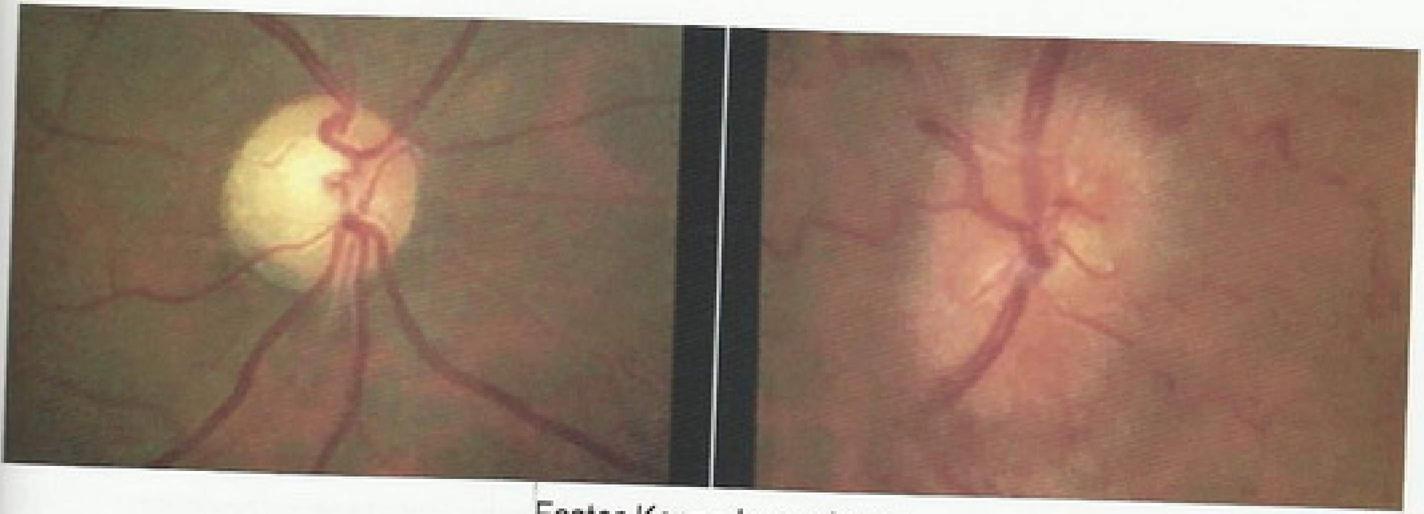
Glaucomatous optic atrophy (B.V interrupted)



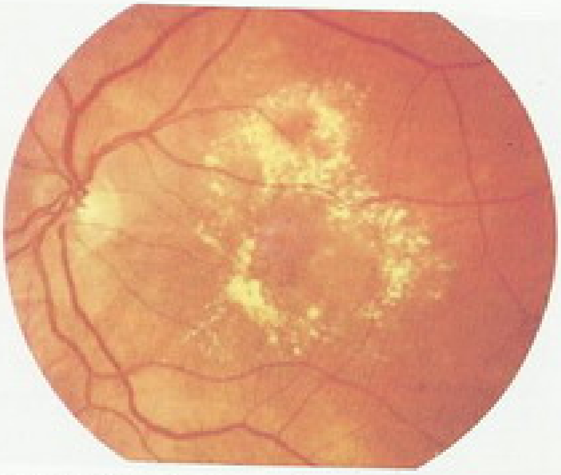
2ry optic atrophy (B.V sheathed)



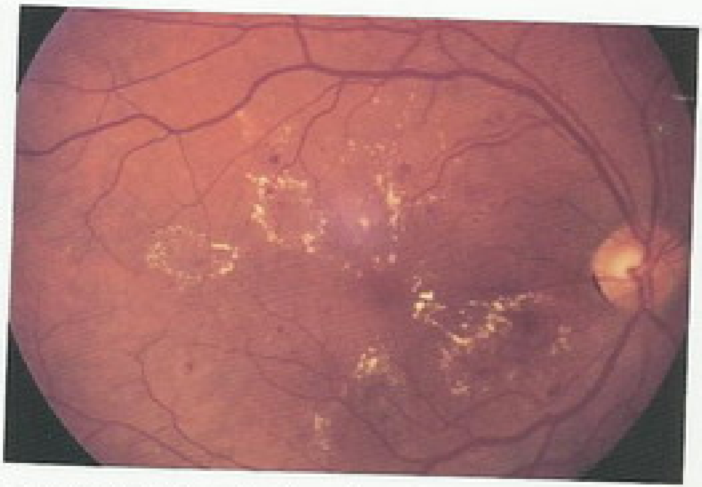
2ry optic atrophy (B.V sheathed)



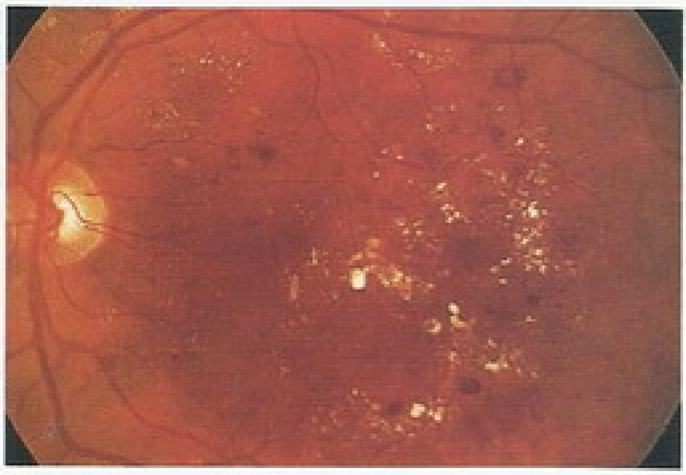
Foster-Kennedy syndrome



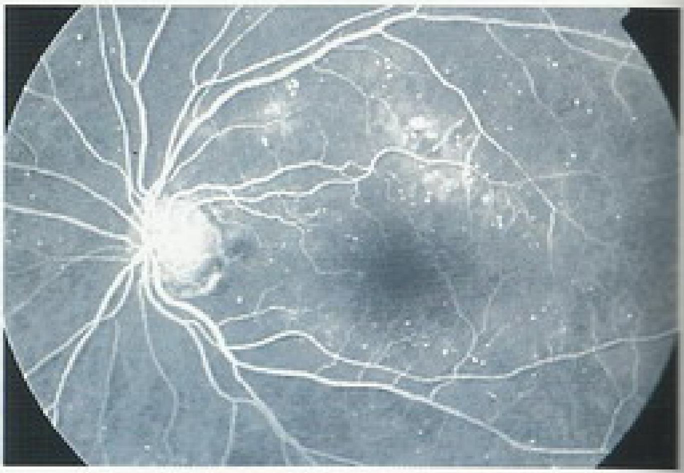
Simple DR showing hard exudates



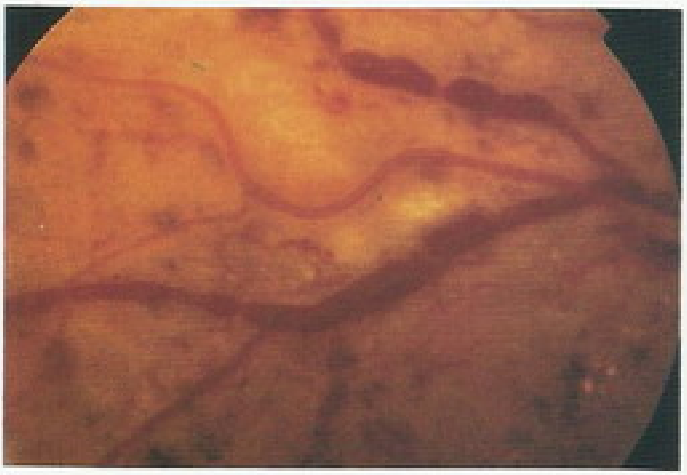
Simple DR showing hard exudates



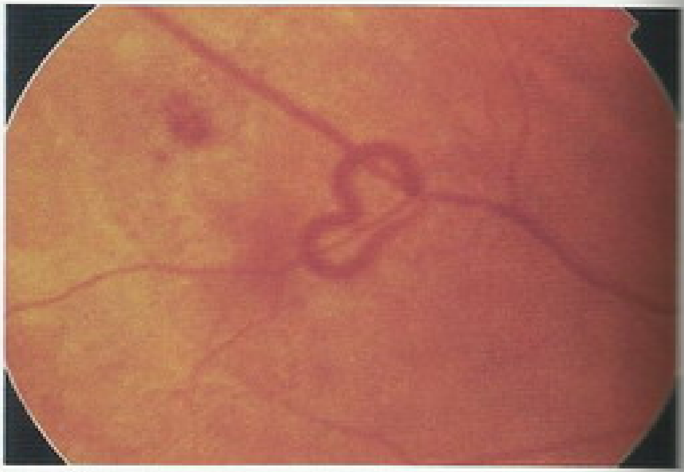
Simple DR showing hard exudates & rounded dots of Hge



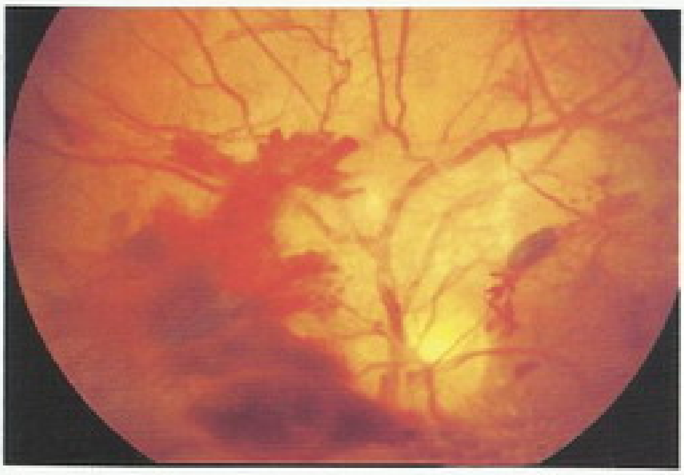
FA of simple DR (white spots=microaneurysms)



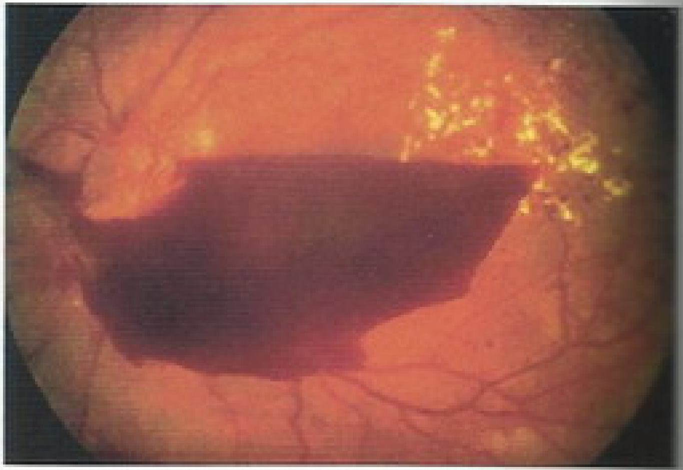
Venous beading in diabetic retinopathy



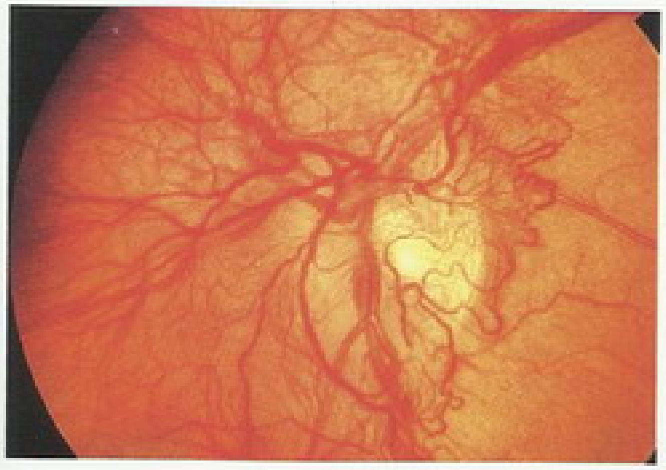
Venous looping in diabetic retinopathy



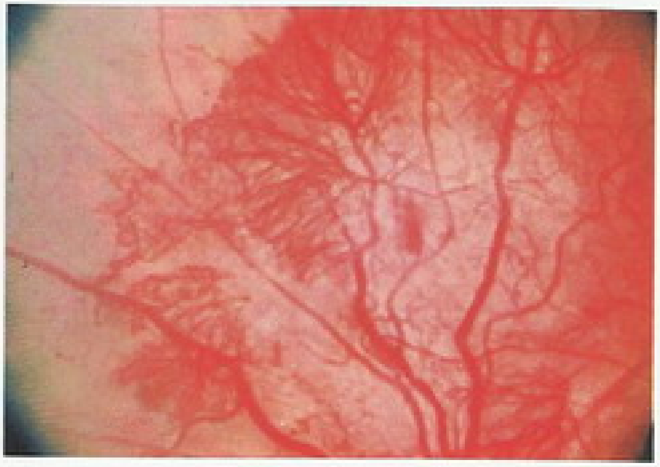
Proliferative diabetic retinopathy (note NVE& blots of pre-retinal Hge)



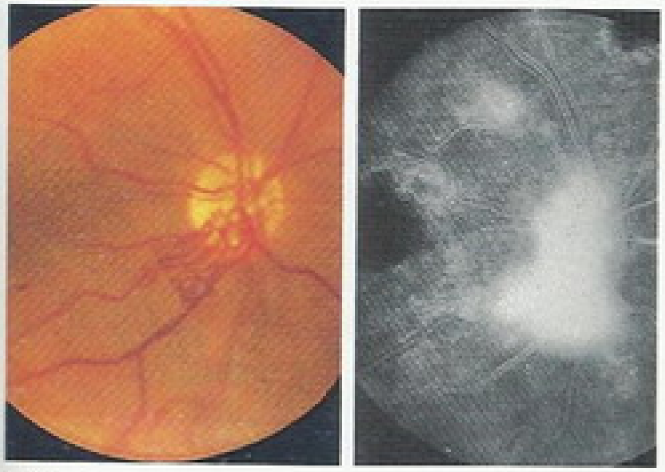
Proliferative diabetic retinopathy (note NVE& blots of pre-retinal Hge)



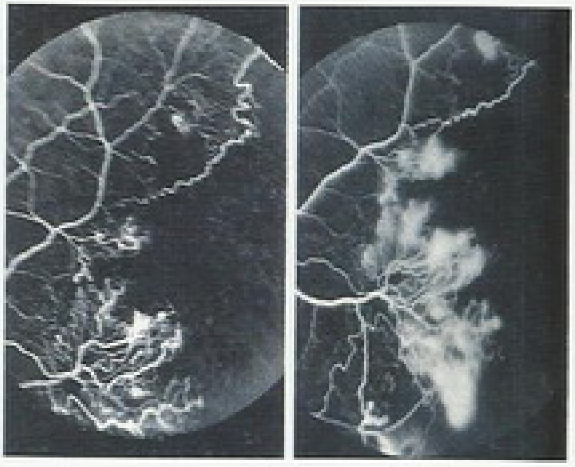
Proliferative DR (note NVE&NVD)



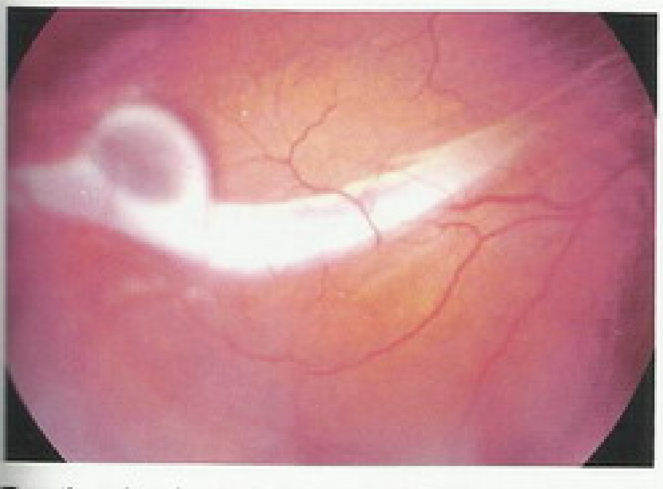
Proliferative DR (NVE)



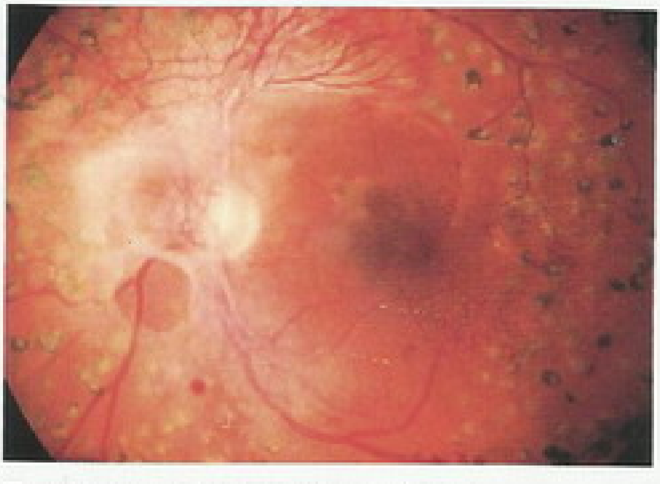
NVD (new blood vessels at the disc)



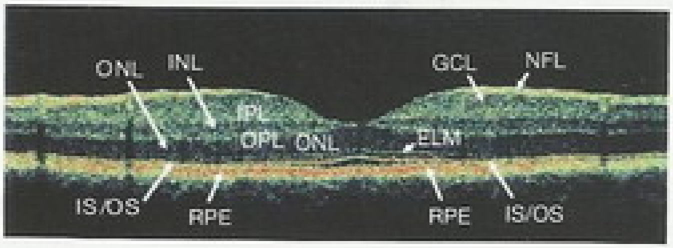
FA showing NVEs with leakage



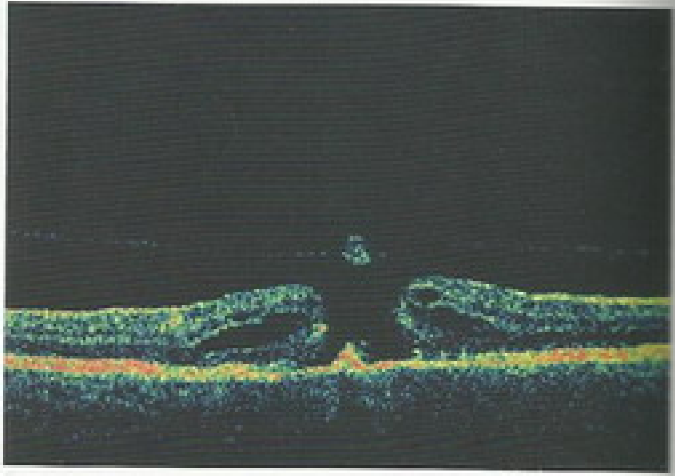
Tractional retinal detachment after Proliferative DR



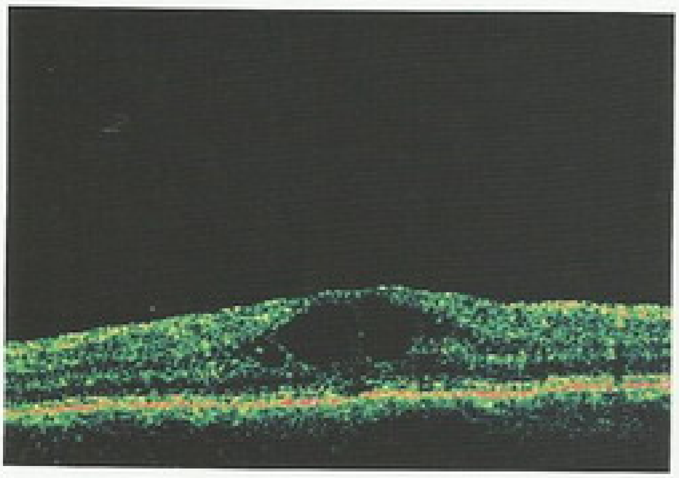
Tractional retinal detachment after Proliferative DR


ONL
INL
GCL
NFL
IPL
OPL
ONL
ELM
IS/OS
RPE
RPE
IS/OS

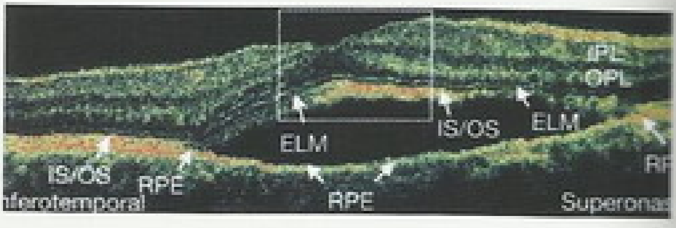
Normal OCT (optical coherence tomgraphy) showing the layers of the retina using polarized light.



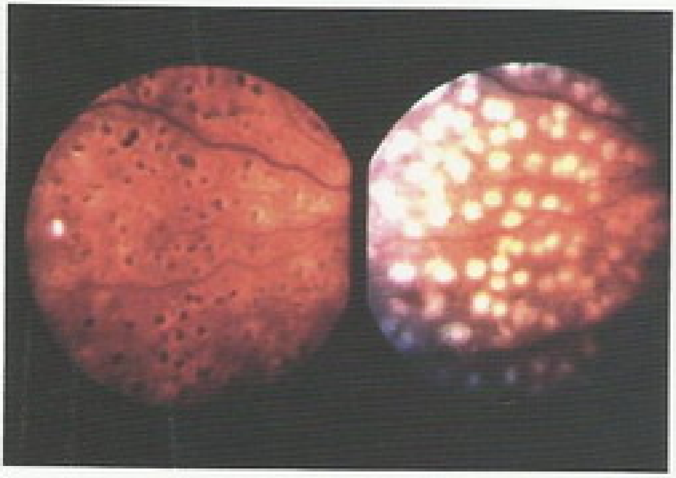
OCT showing macular hole (defect in the retinal sensory layer).



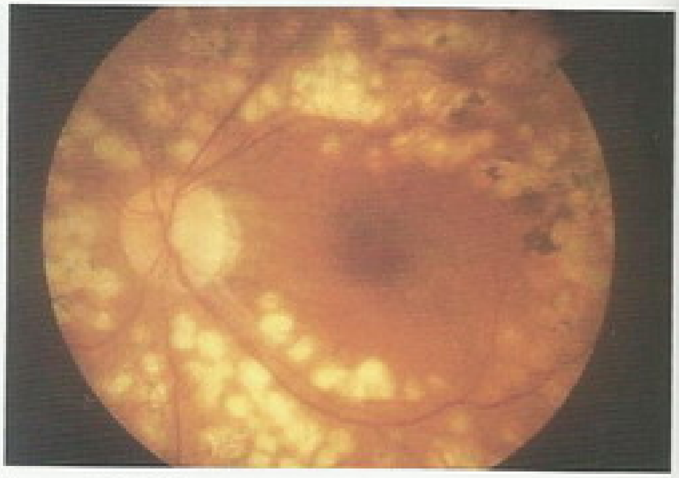
OCT showing cystoid macular oedema


IPL
OPL
ELM
IS/OS
ELM
IS/OS
RPE
nferotemporal
RPE
Superonas
RF

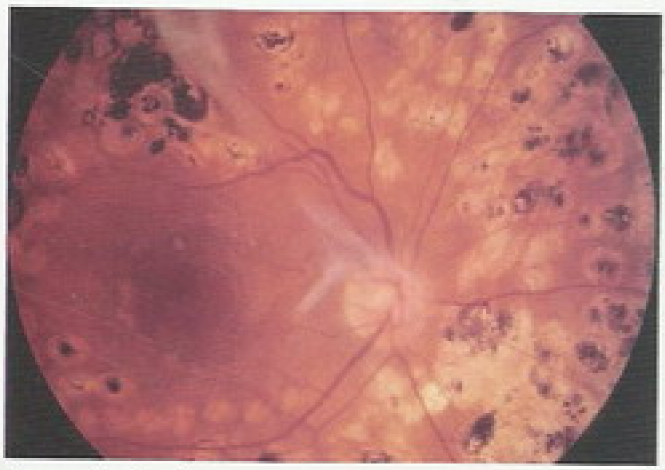
OCT showing separation of the sensory retina from the RPE



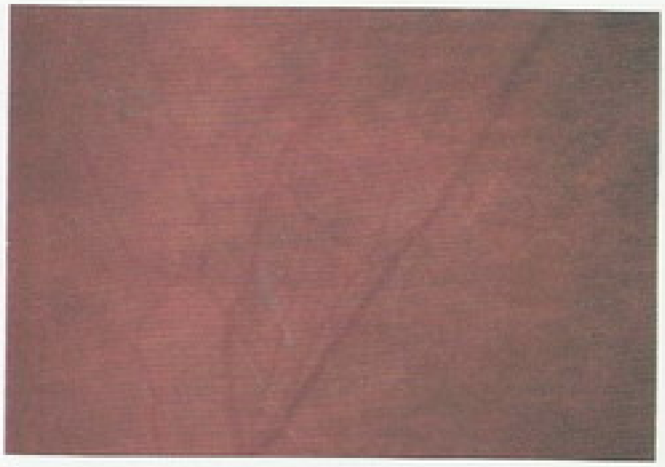
Pan-retinal photocoagulation by argon laser (PRP) (old-recent)



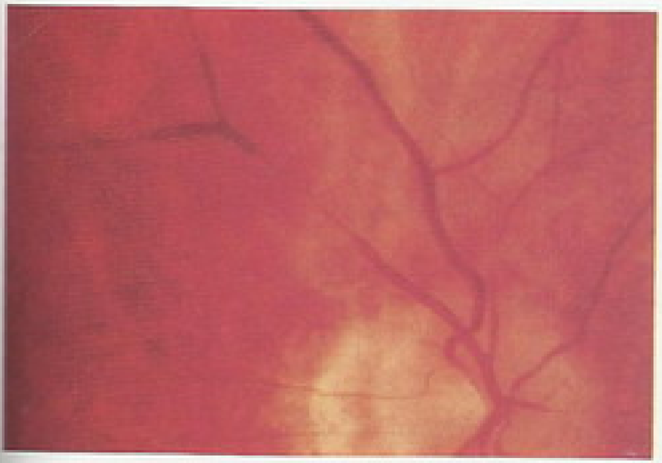
Pan-retinal photocoagulation by argon laser (PRP)



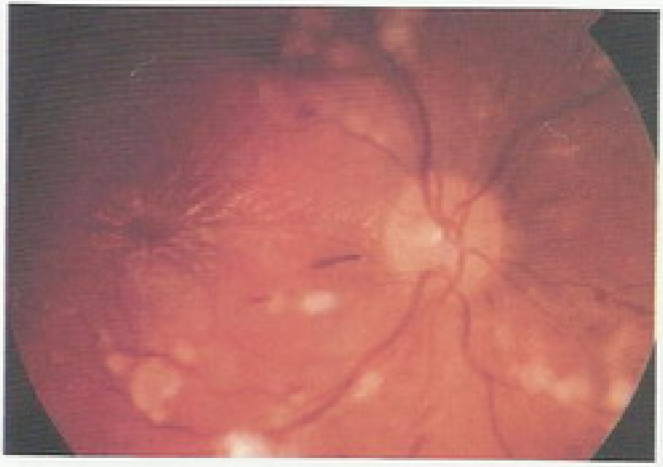
Pan-retinal photocoagulation by argon laser (PRP)



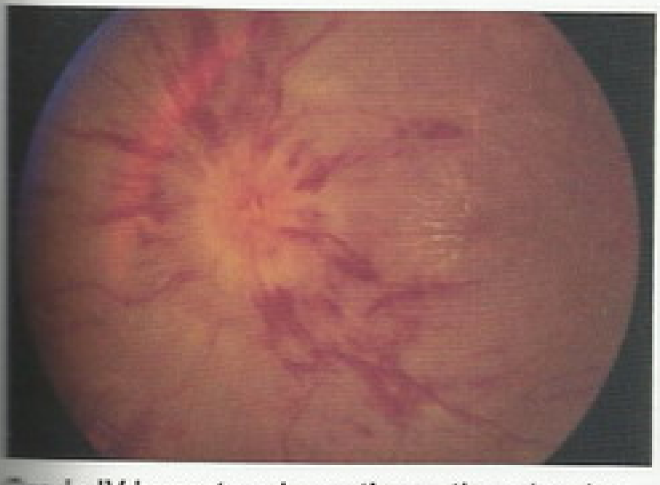
Grade I hypertensive retinopathy: showing generalized arterial narrowing



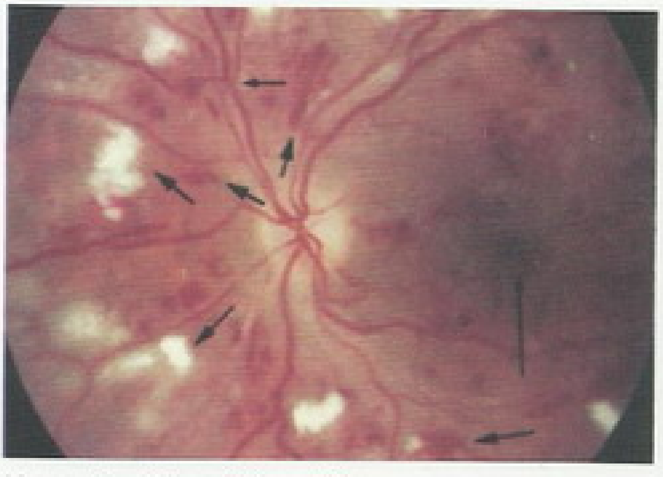
Grade II hypertensive retinopathy: showing focal arteriolar narrowing



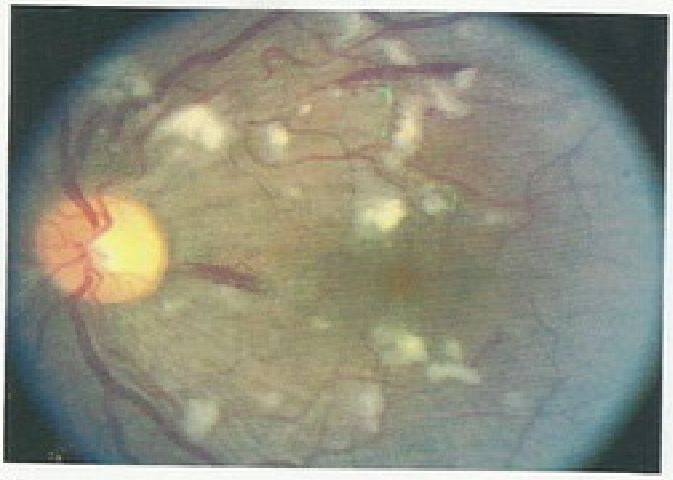
Grade III hypertensive retinopathy: showing
- flame shaped retinal hge
- cotton wool exudates - macular star



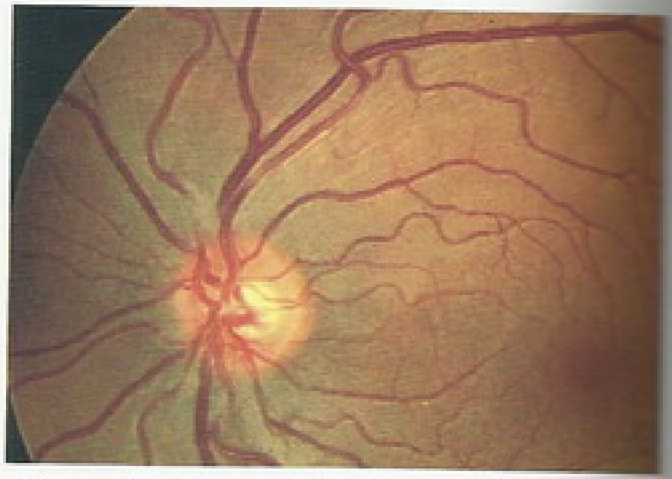
Grade IV hypertensive retinopathy: showing
- falme shaped retinal hge
- macular star - papilloedema



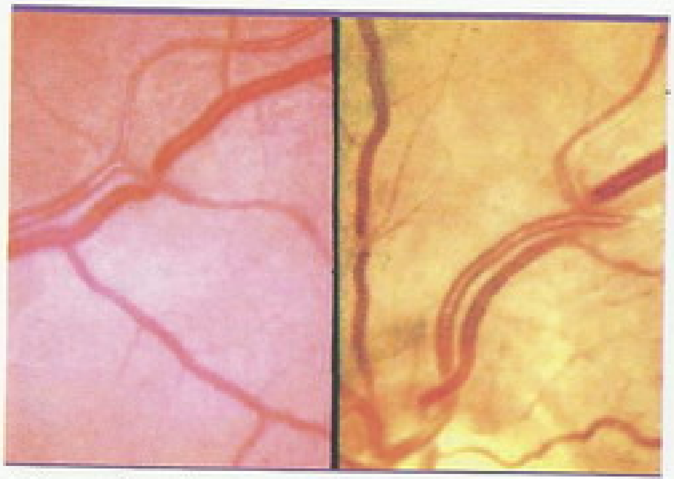
Hypertensive retinopathy
1. The cotton wool exudates.
2. Flame shaped Hge. 3. Mild papilloedema
4. A-V crossing changes



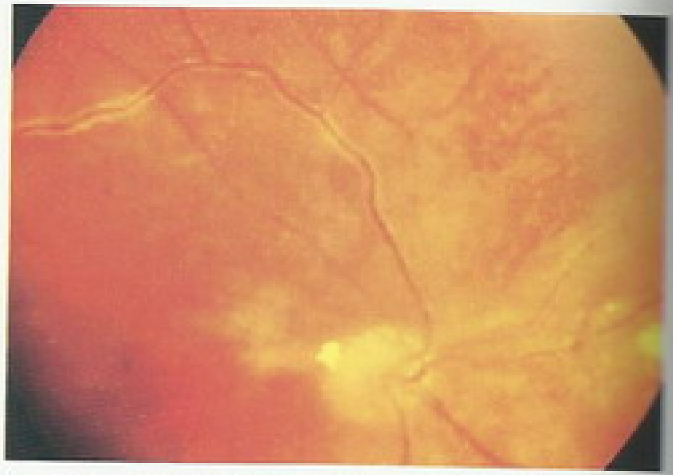
Hypertensive retinopathy
1. The cotton wool exudates.
2. Flame shaped Hge. 3. Mild papilloedema
4. A-V crossing changes



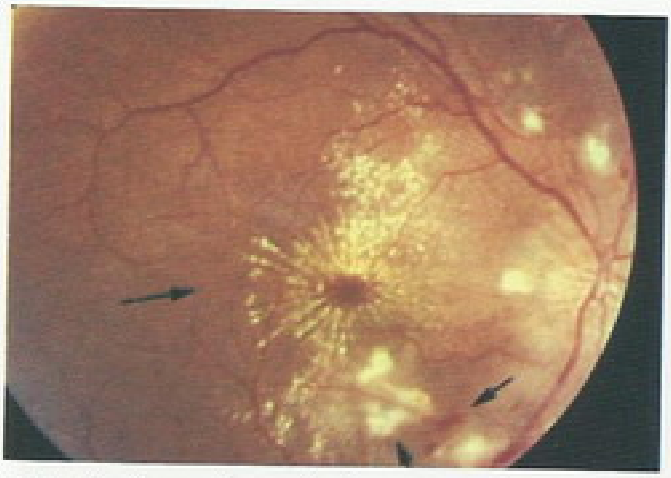
A-V crossing changes (Z-shaped deflection)



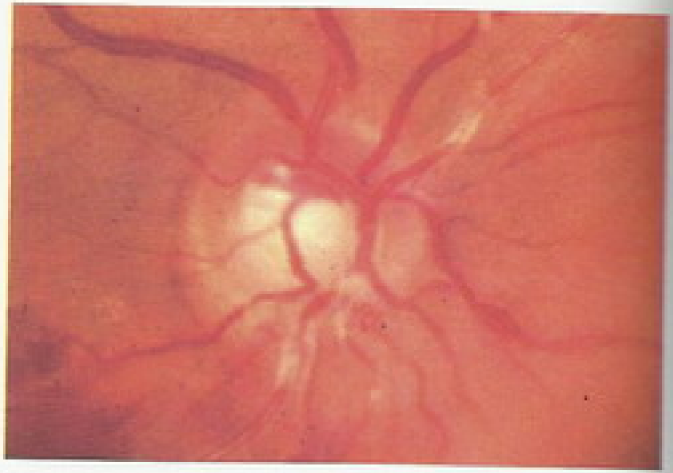
A-V crossing changes:
- U-shaped deflection+ Silver wiring.
- Banking sign.



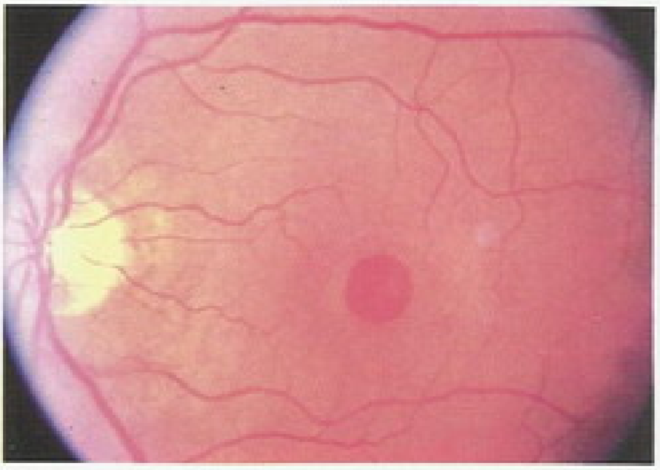
Hypertensive retinopathy, atherosclerosis (Sheathing of the B.V)



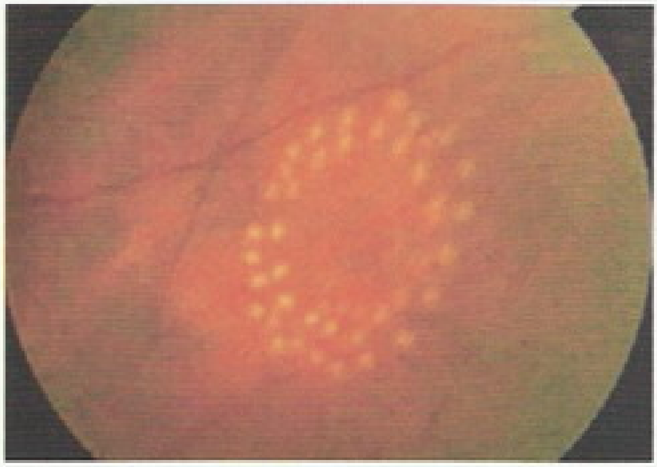
Hypertensive retinopathy (note the macular star (fan)&cotton wool exudates & papilloedema)



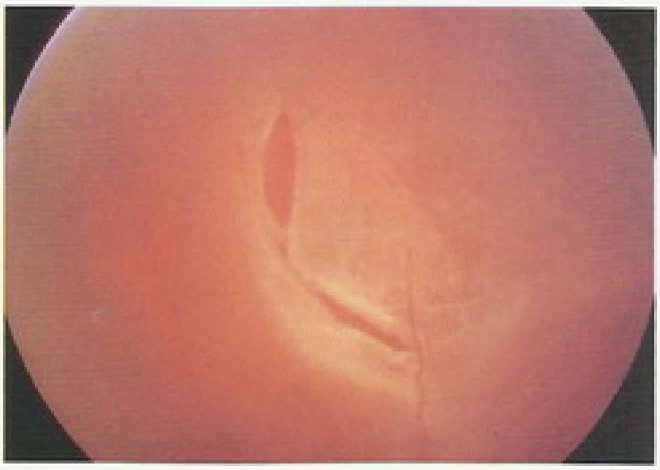
Sheathing of the B.V



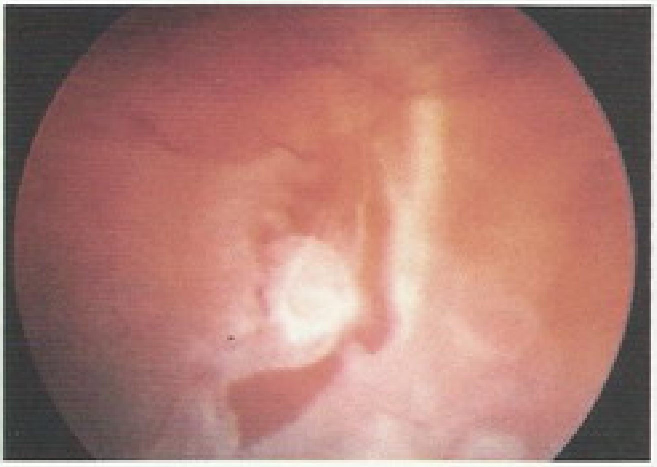
Macular hole



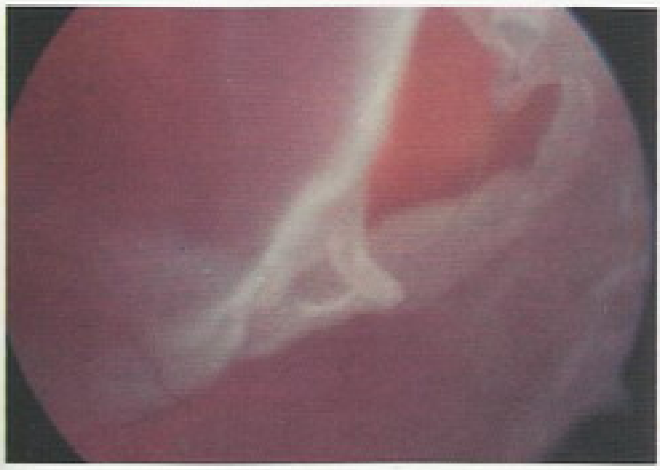
Macular hole treated with argon laser



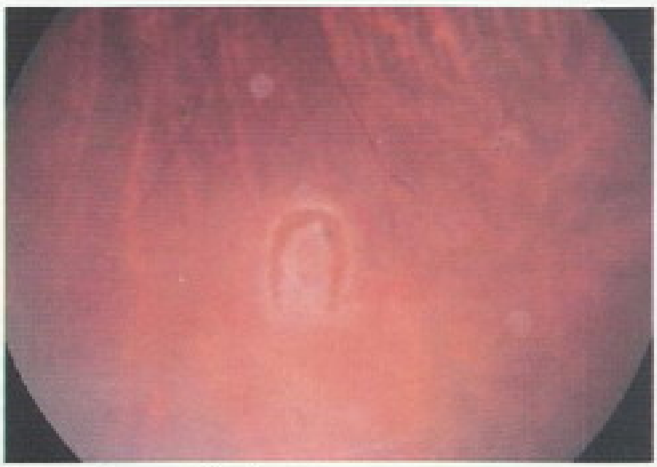
Rhegmatogenous RD (retinal tear)



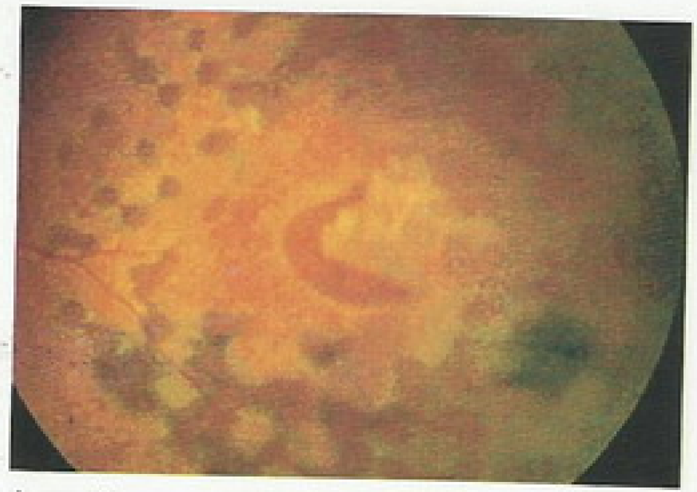
Rhegmatogenous RD (retinal tear)



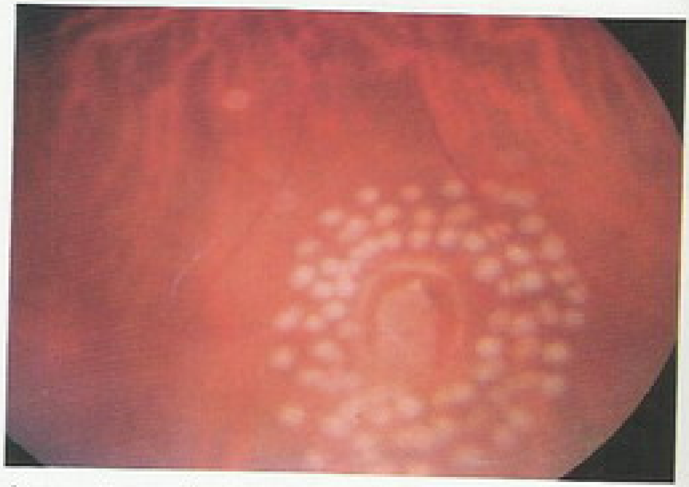
Rhegmatogenous RD (retinal tear)



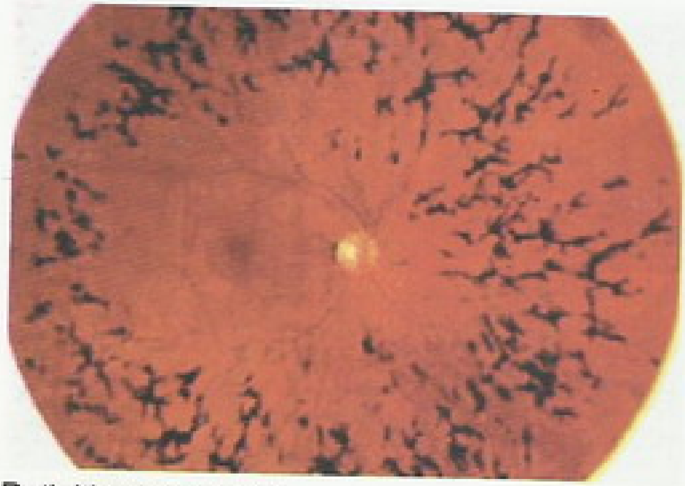
Horse-shoe retinal tear



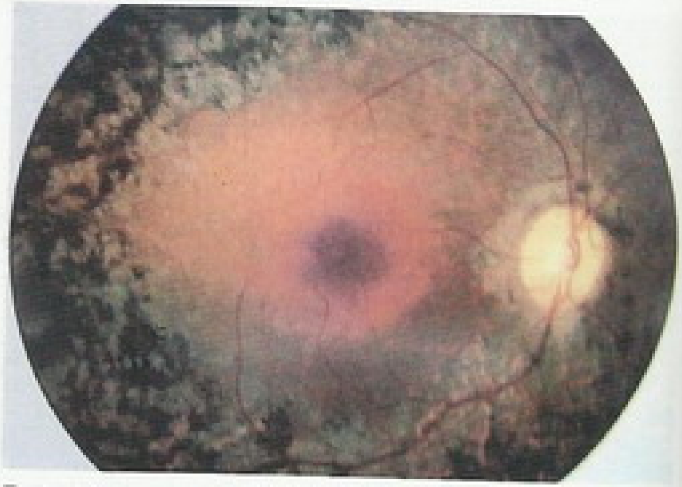
Argon laser photocoagulation of a Horse-shoe retinal tear



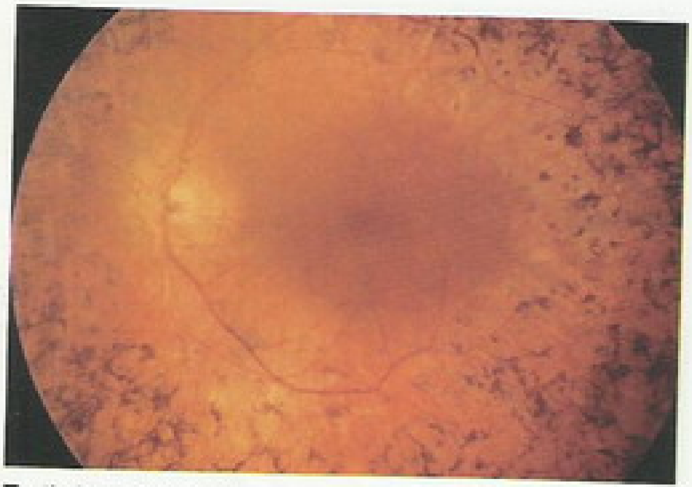
Argon laser photocoagulation of a Horse-shoe retinal tear



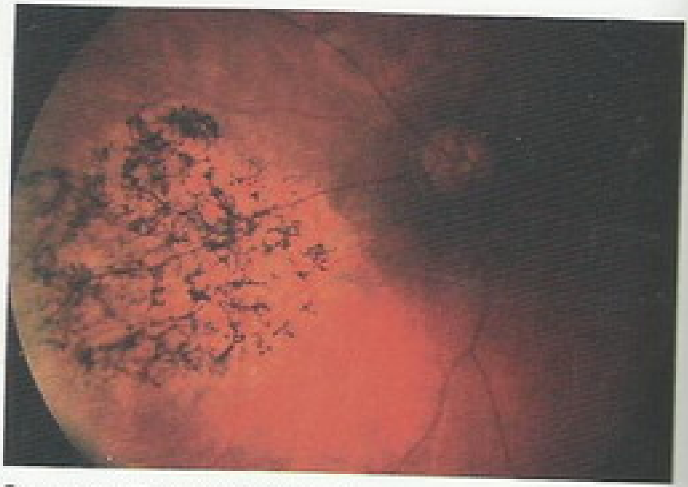
Retinitis pigmentosa



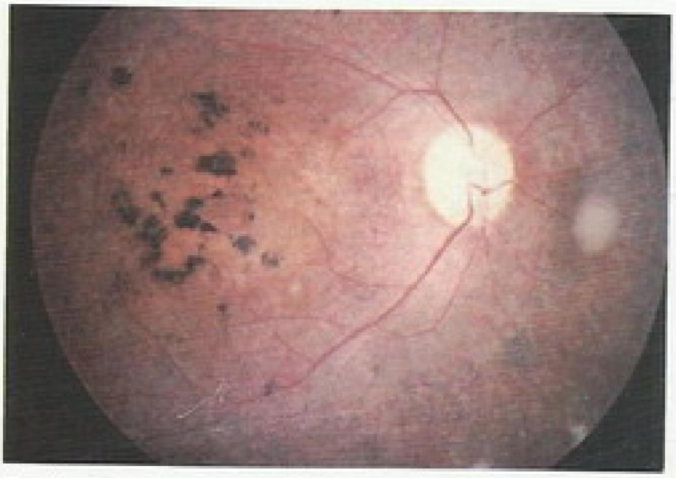
Retinitis pigmentosa



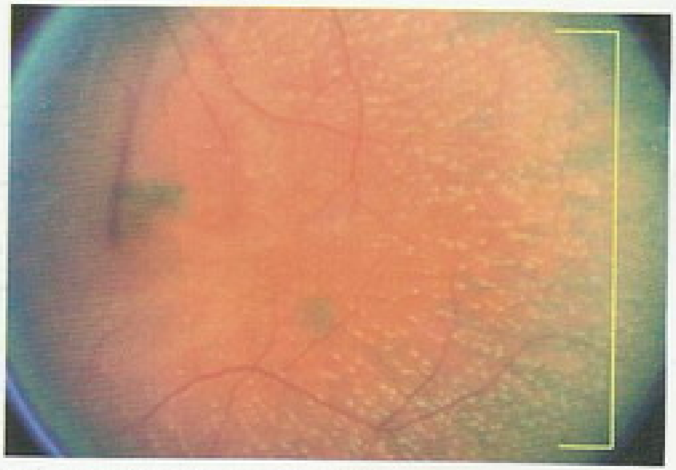
Retinitis pigmentosa



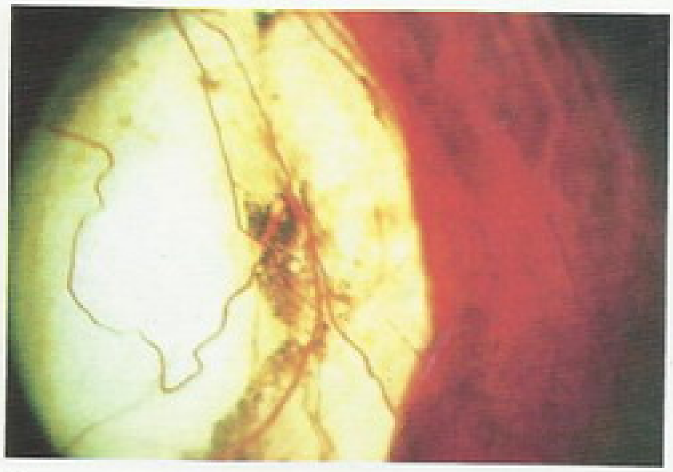
Sectorial Retinitis pigmentosa



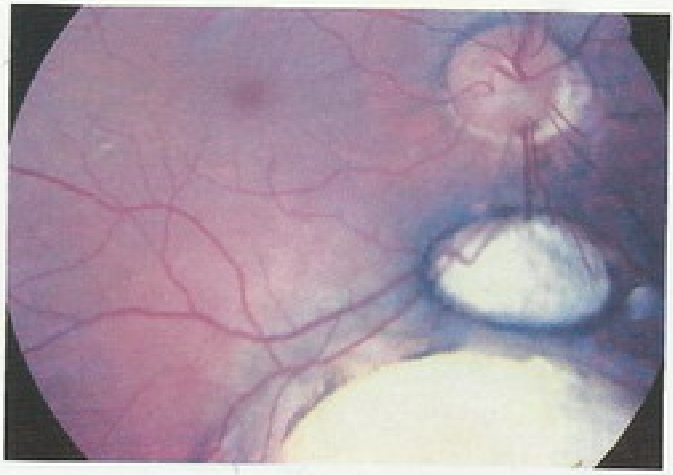
Pericentric retinitis pigmentosa



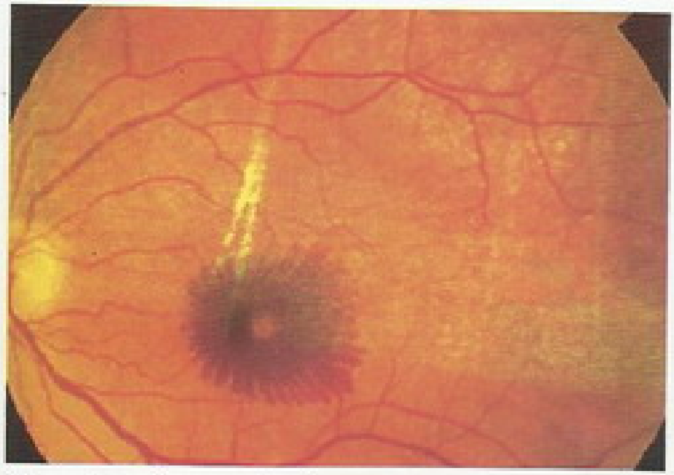
Retinitis punctata albescens



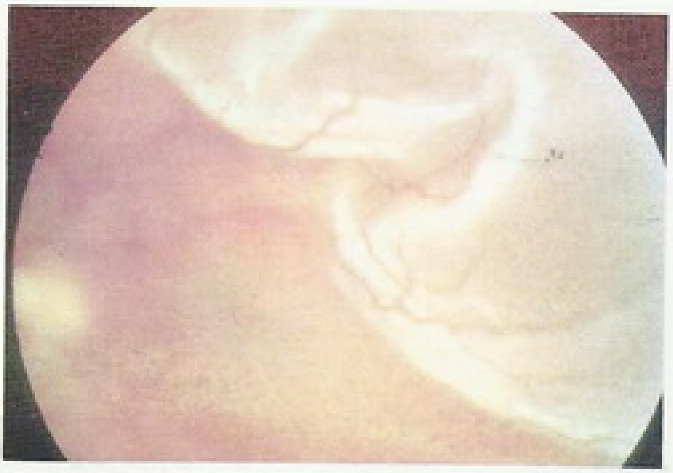
Choroidal coloboma



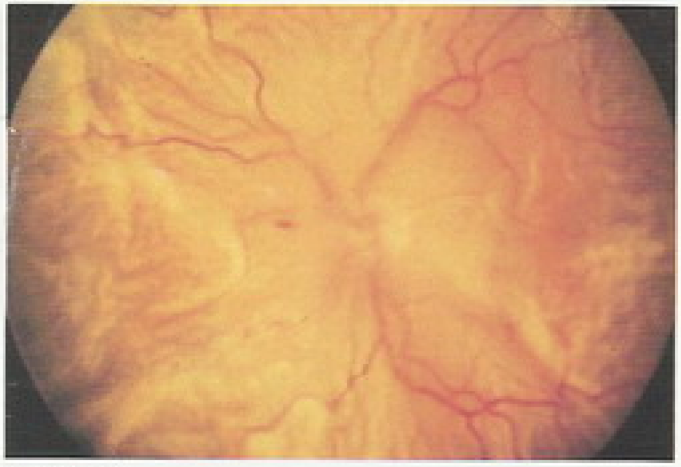
Choroidal coloboma



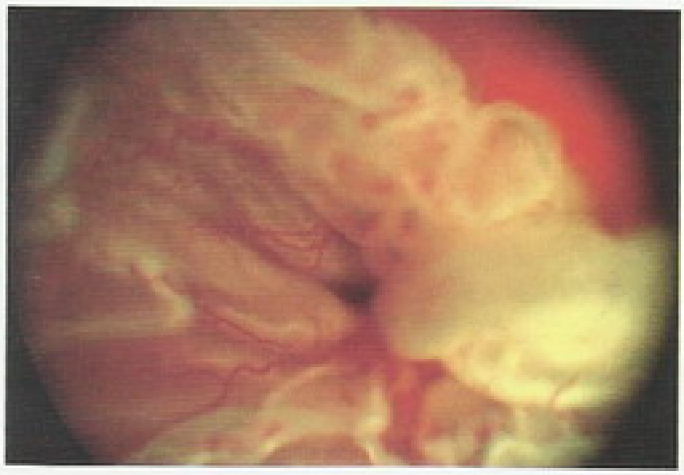
Star shaped macular Hge



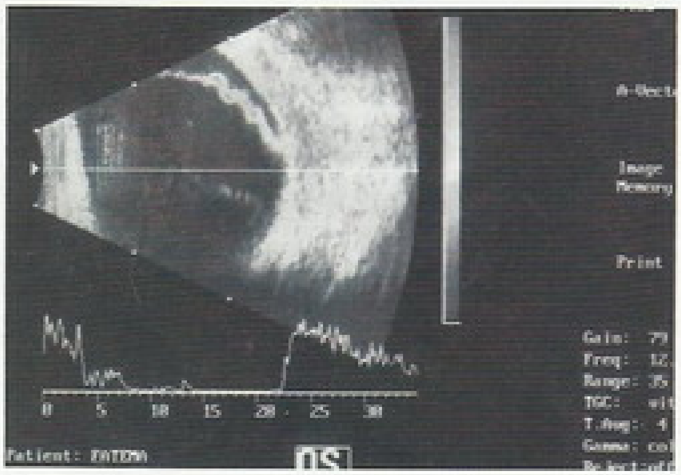
RD



Total RD

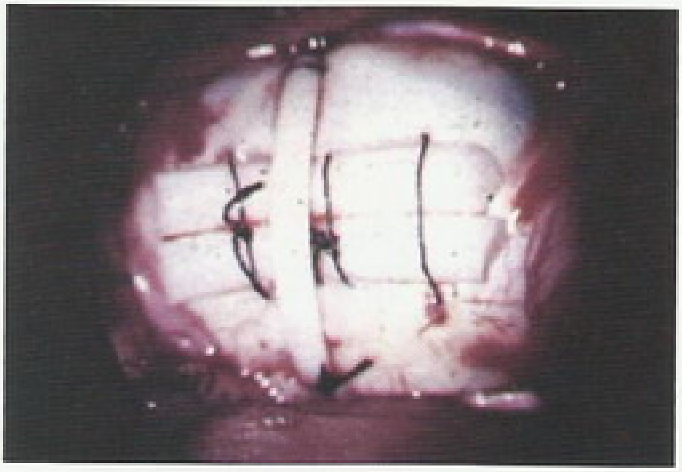


Total RD

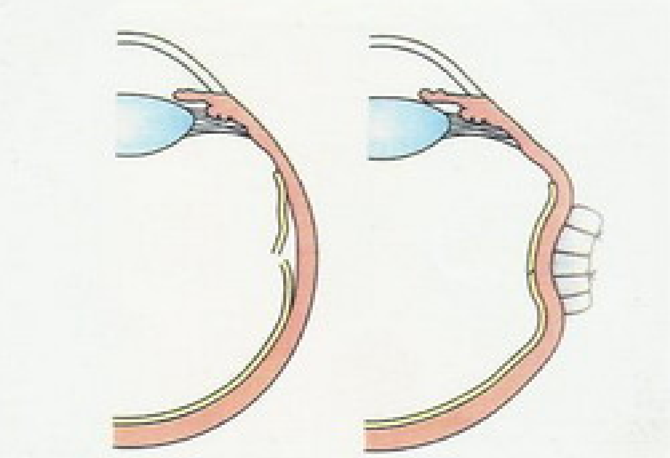


A-Vect
Image
Memory
Print
Gain: 79
Freq: 12.
Range: 35
TGC: wit
T.Avg: 4
Gamma: co
Reject:of
0
5
10
15
20
25
30
Patient: FATEMA
OS

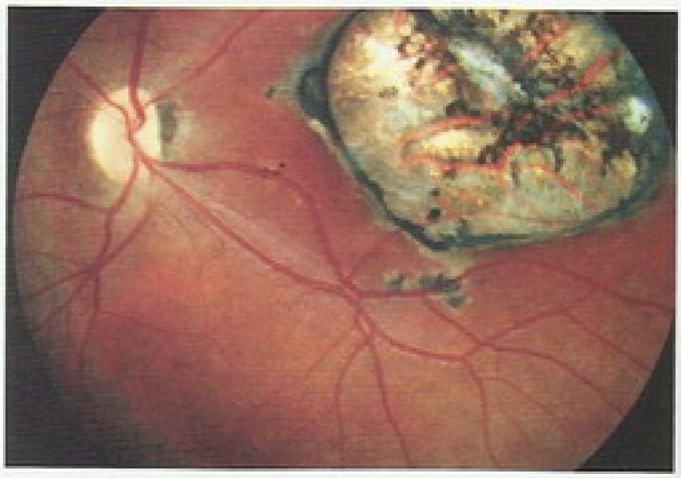
B-scan ultrasound of RD (sure sign: detached retina atatched to optic disc)



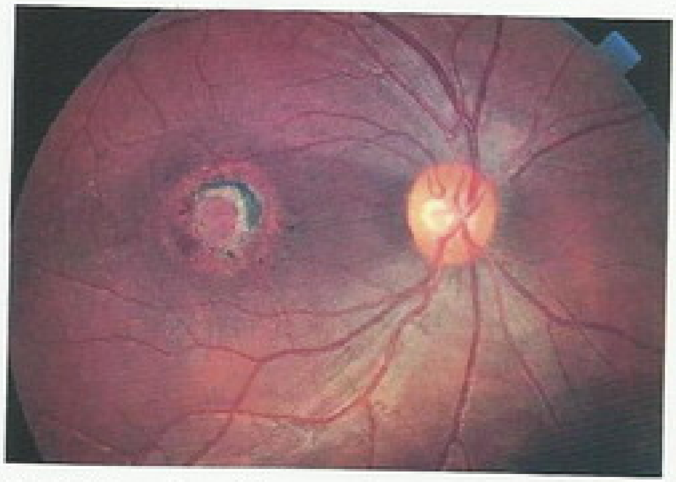
Scleral buckling



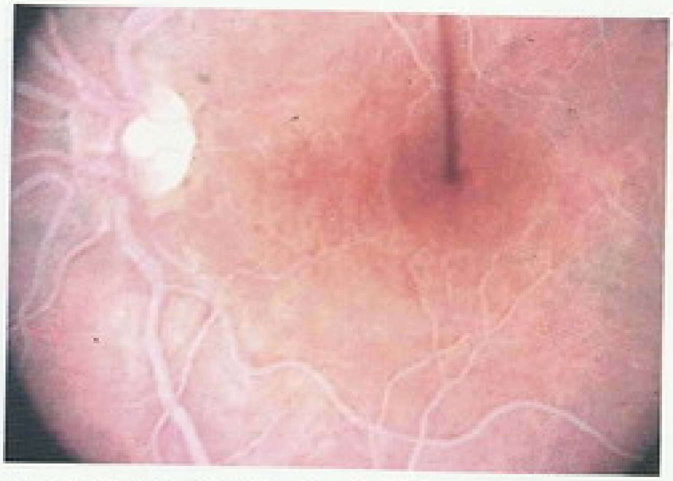
principle of scleral buckling



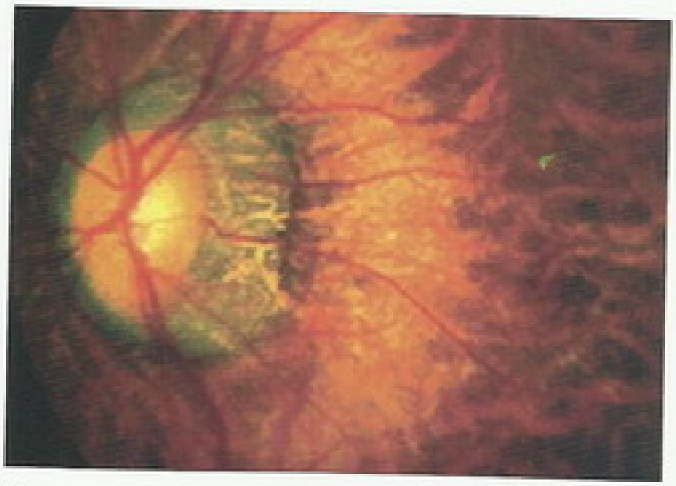
Toxoplasmosis of the retina



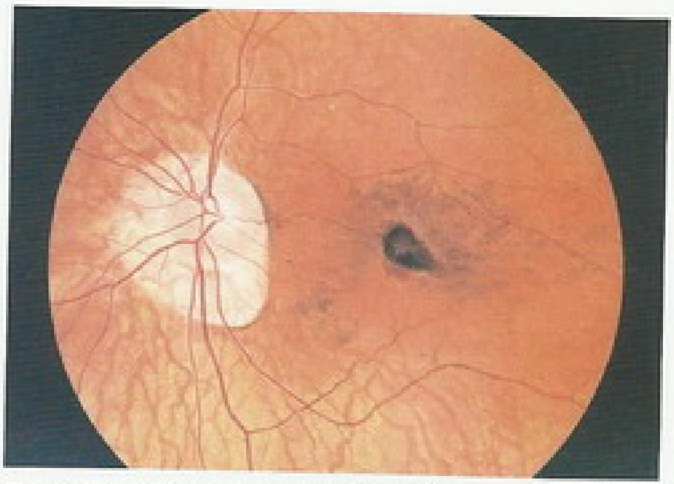
Toxoplasmosis of the macula



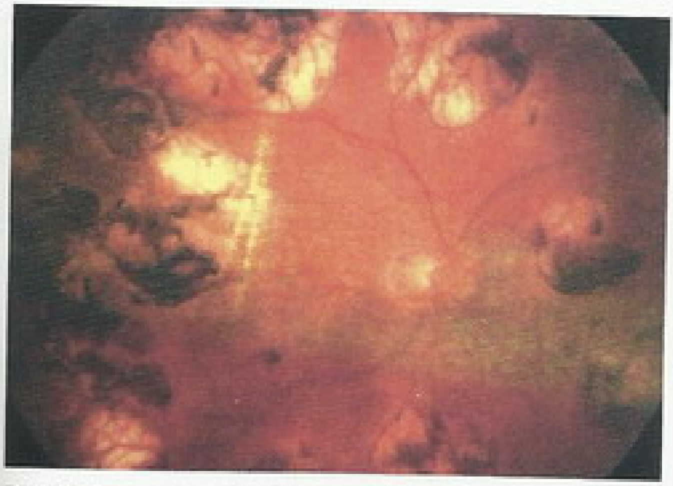
Lipemia retinalis (pale fundus& milky B.V)



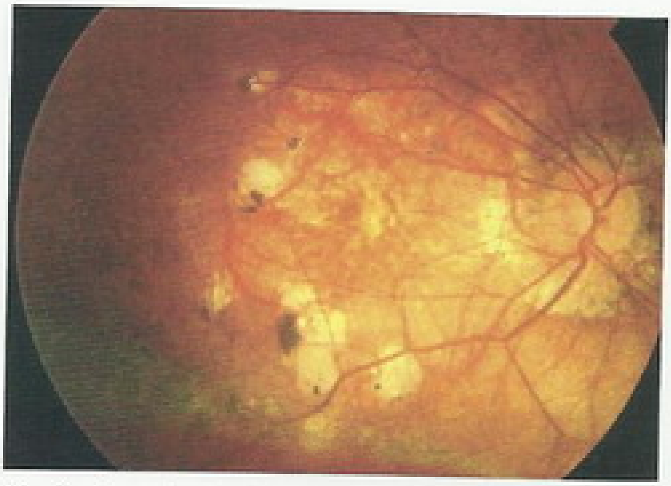
Exaggerated tegroid fundus in high myopia + PPA = peri papillary atrophy.



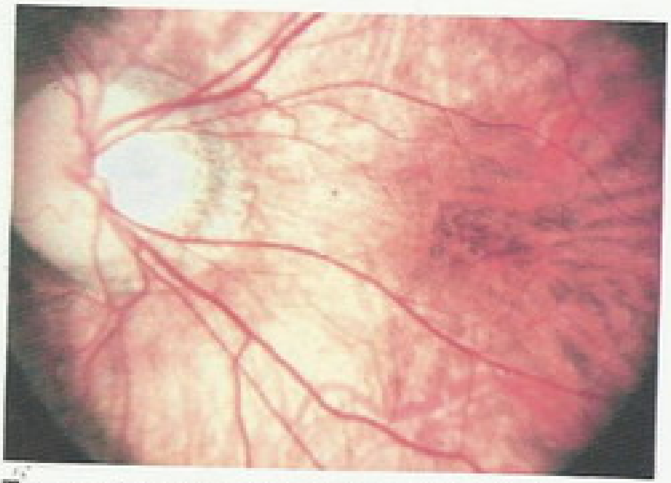
Fuch's spot at the macula in high myopia + PPA = peri papillary atrophy.



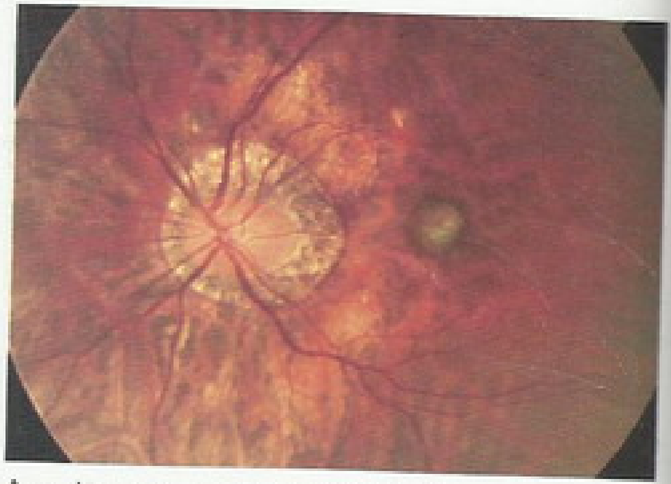
Dissiminated choroido-retinal degenerations in high myopia



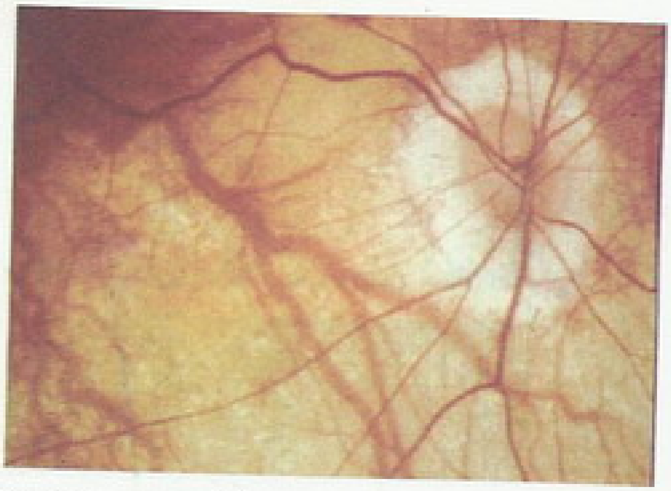
Dissiminated choroido-retinal degenerations in high myopia



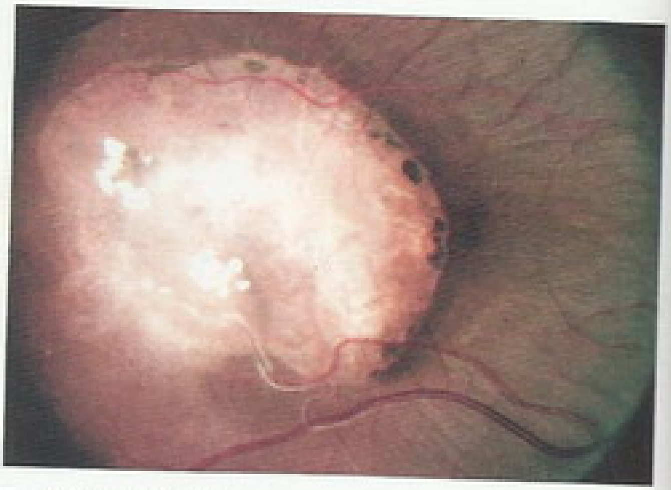
Temporal crescent in a high myopic fundus (note exaggerated tegroid fundus)



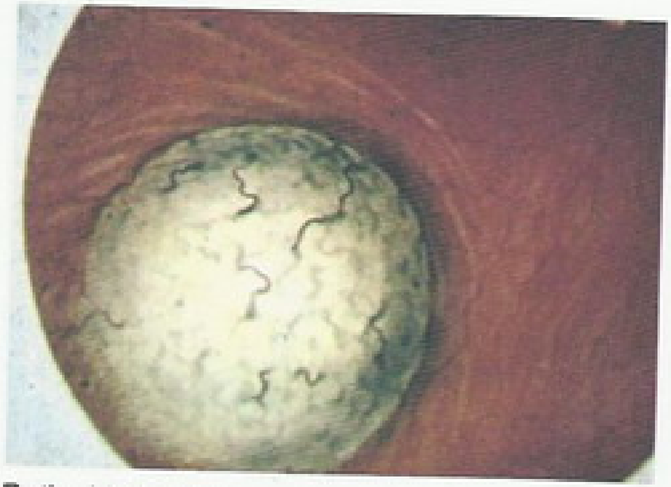
Annular crescent in high myopia



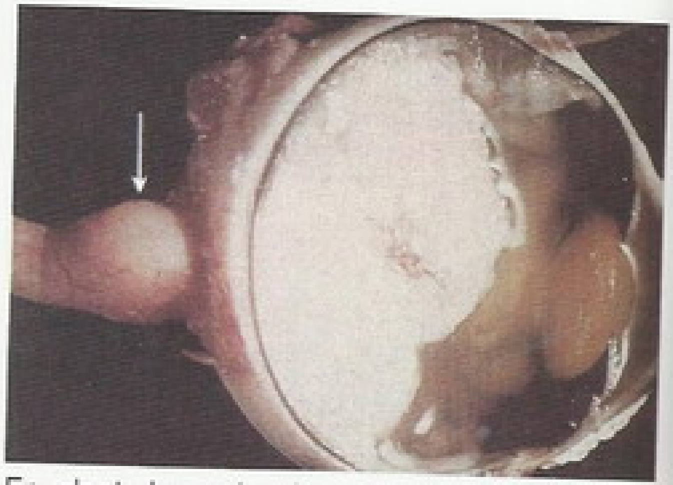
Annular crescent in case of high myopia



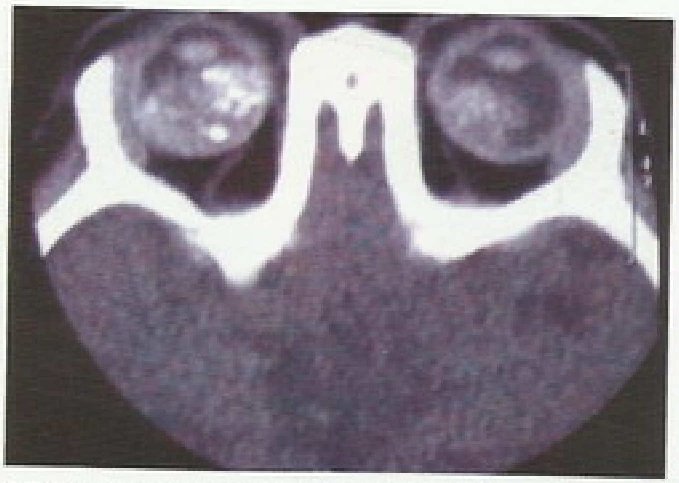
Retinoblastoma



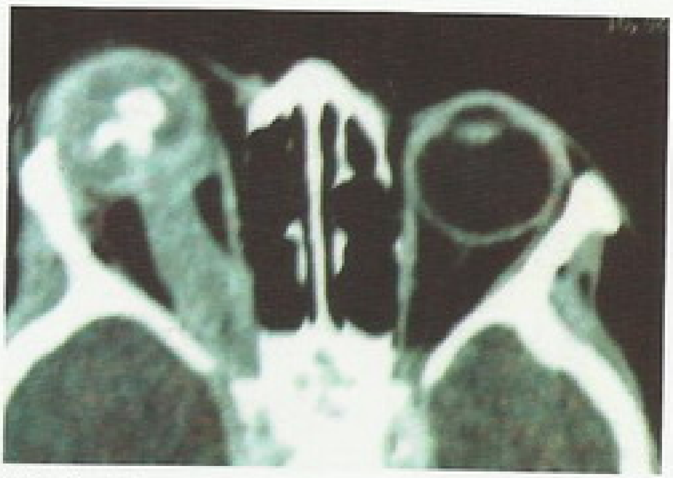
Retinoblastoma



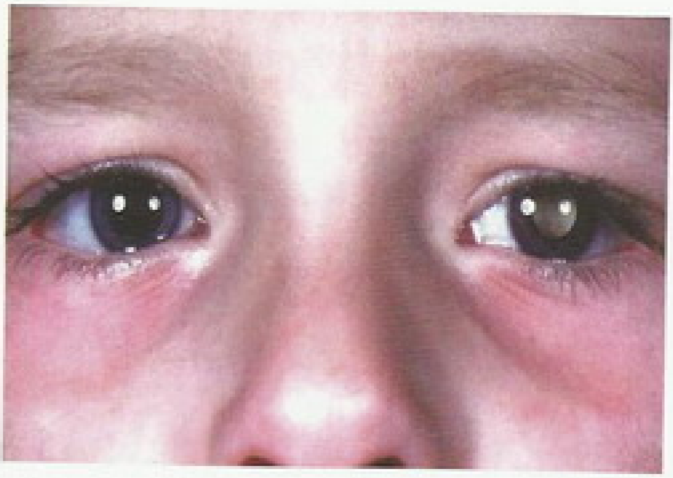
Enucleated eye showing retinoblastoma with optic nerve extension



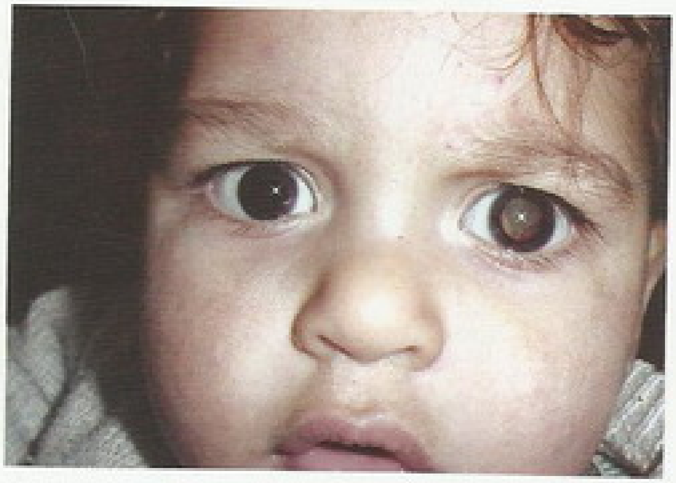
CT showing calcifications in case of retinoblastoma



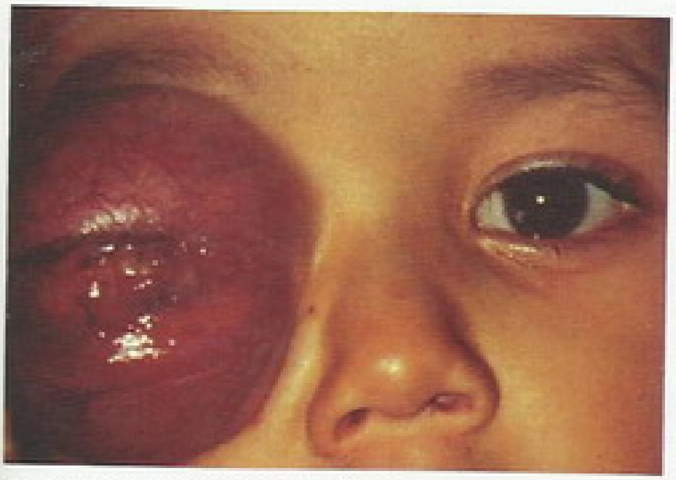
CT showing retinoblastoma with optic nerve extension(note the calcifications)



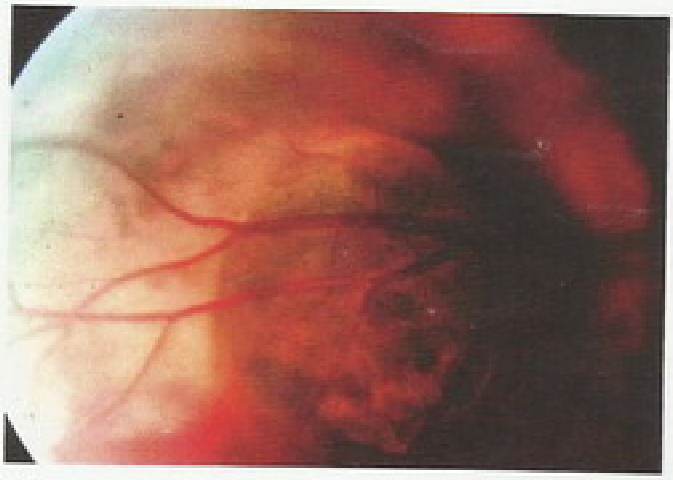
Left amaurotic cat's eye (leuko-coria)



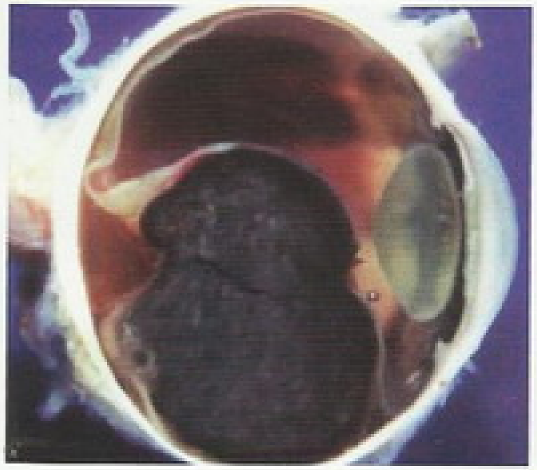
Left amaurotic cat's eye (leuko-coria)



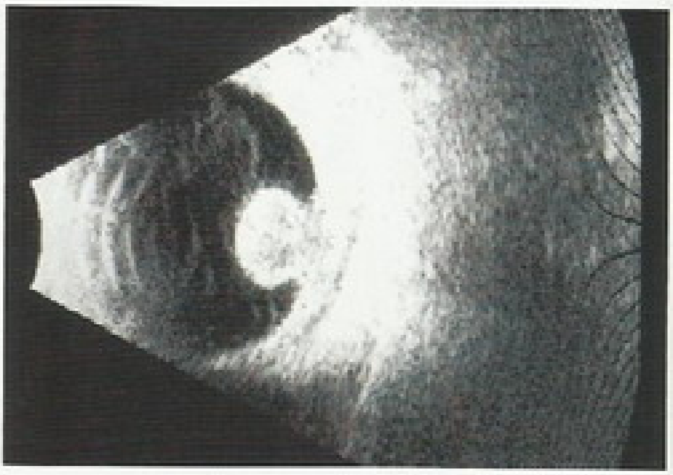
Right Retinoblastoma extension



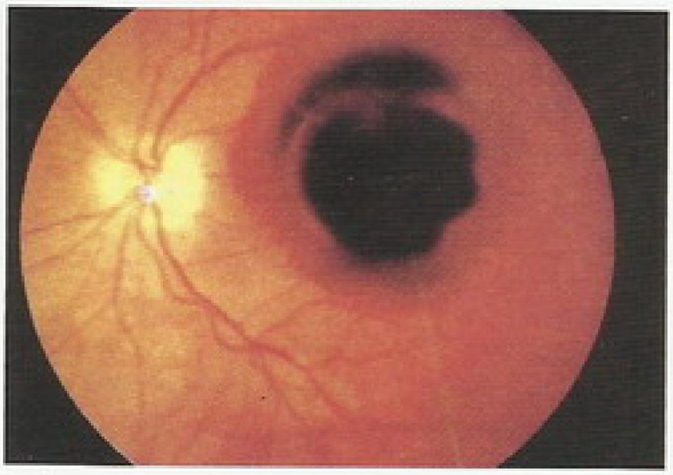
Malignant melanoma of the choroid



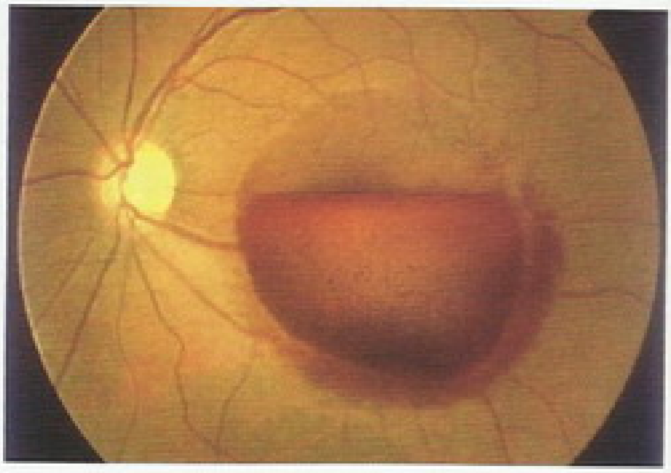
malignant melanoma in enucleated eye



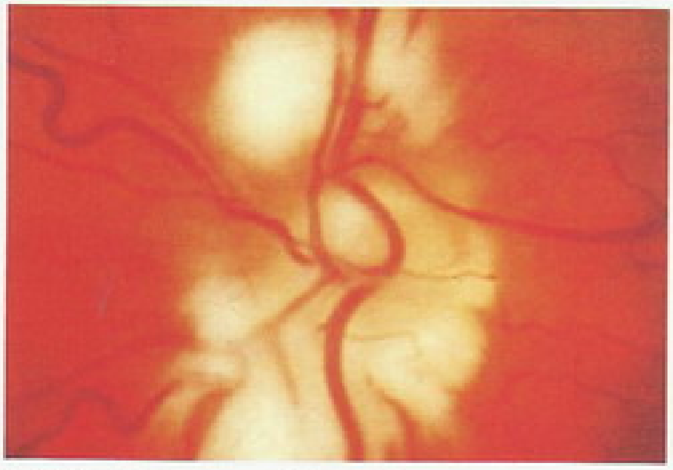
B-scan ultrasound showing malignant melanoma of the choroid (note the collar stud)



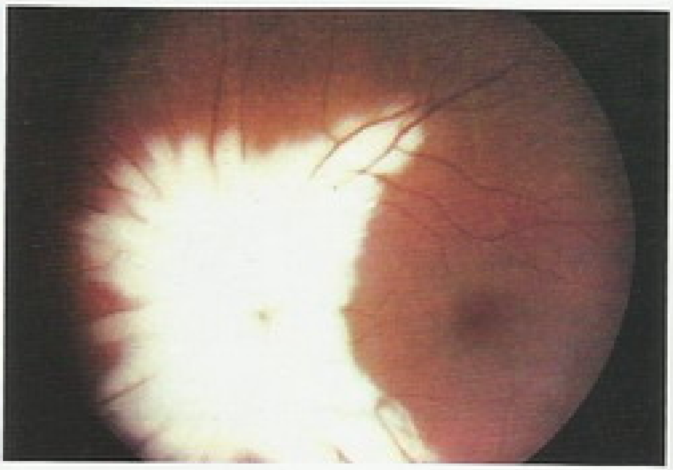
Retinal & macular Hge



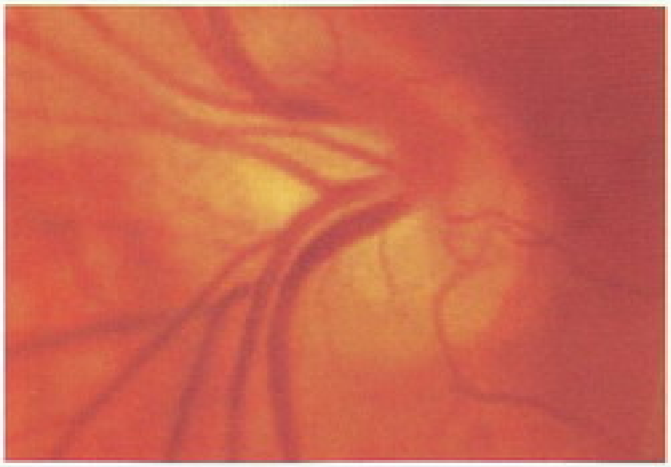
Subhyaloid Hge



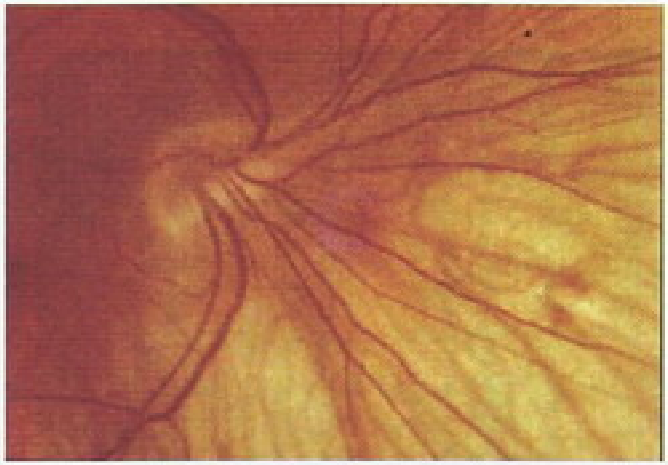
Myelinated nerves of the retina



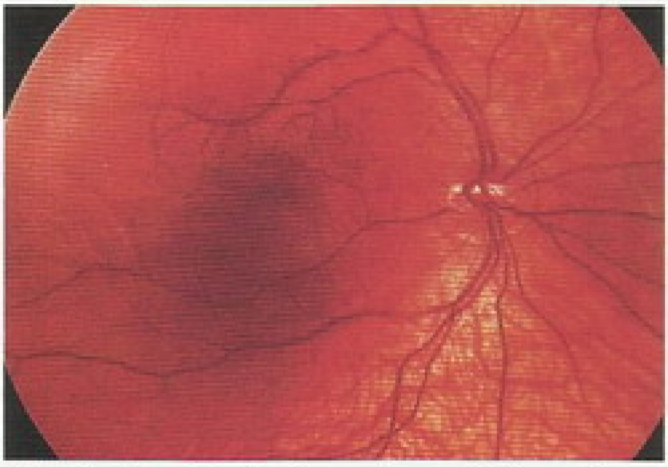
Myelinated nerves of the retina



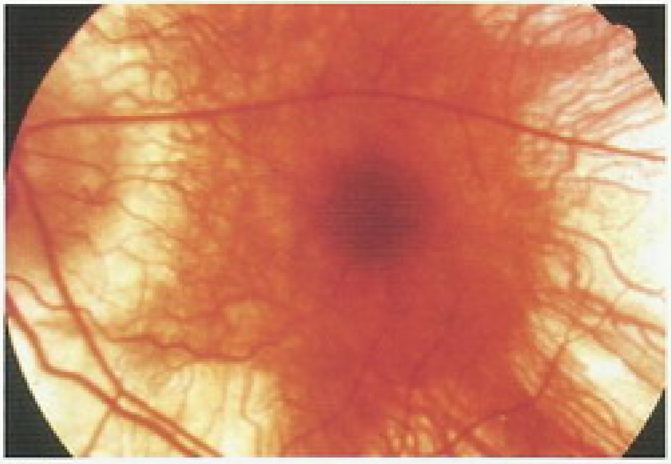
Tilted disc (the optic disc appears oval or D-shaped



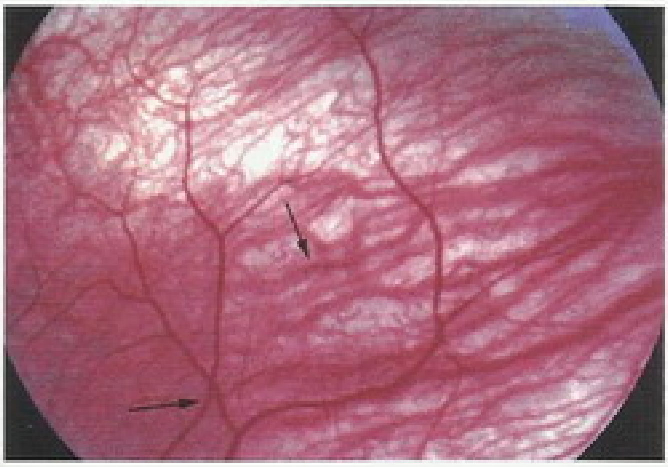
Tilted disc (the optic disc appears oval or D-shaped



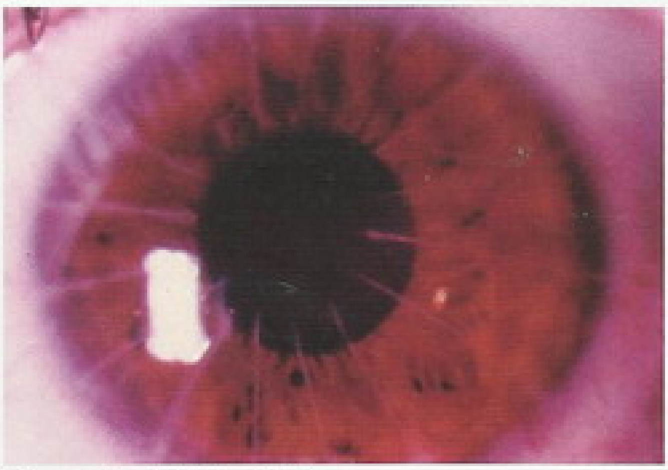
Albinism (see fundus hypopigmentation and choroidal B. V. are seen deeper to the retinal BVs on grey-white scleral background)



Albinism



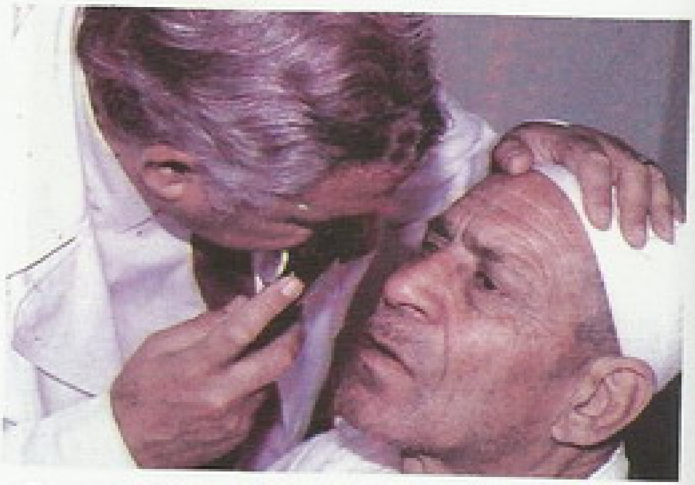
Albinism



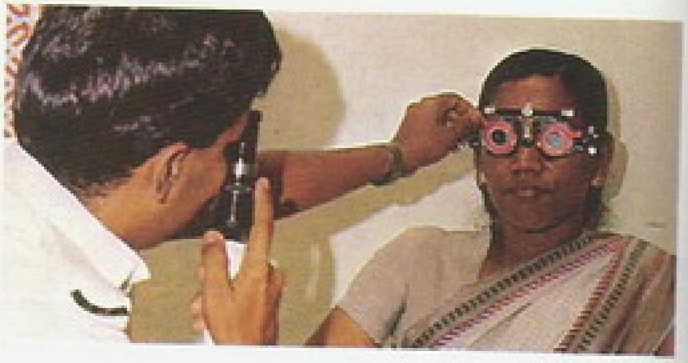
Scars of radial keratotomy

Direct
Ophthalmoscope

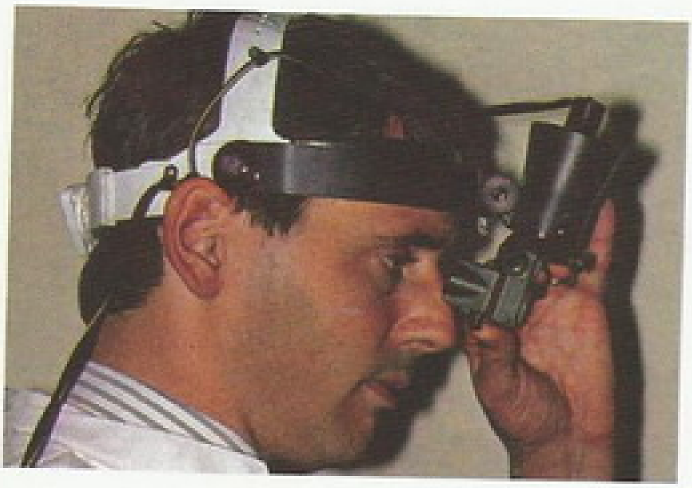
Retinoscope



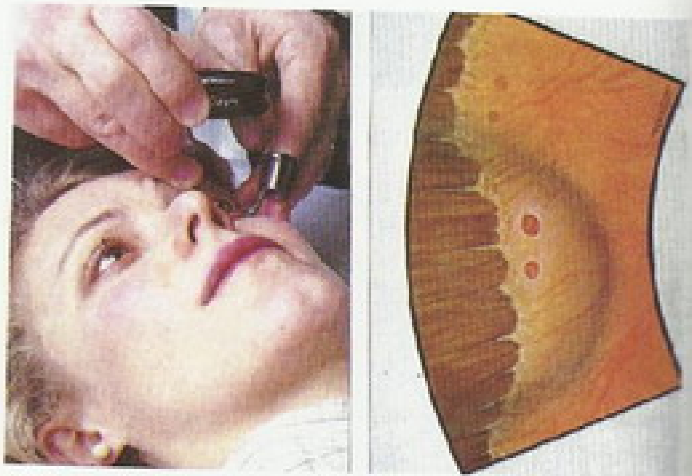
Direct ophthalmoscope



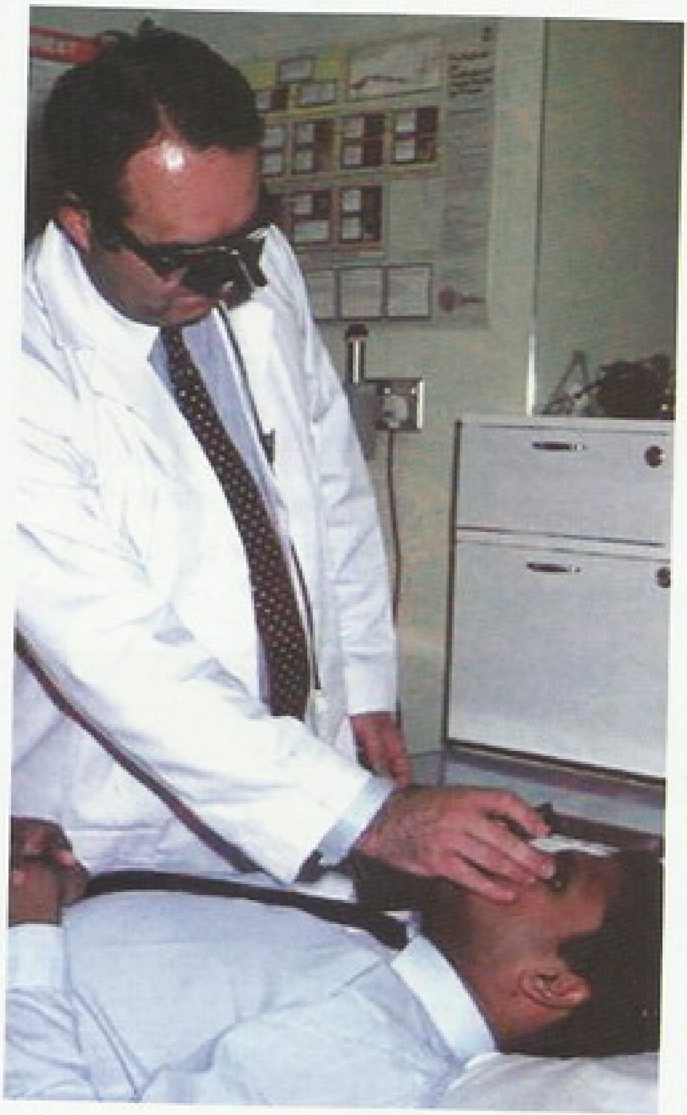
Retinoscope



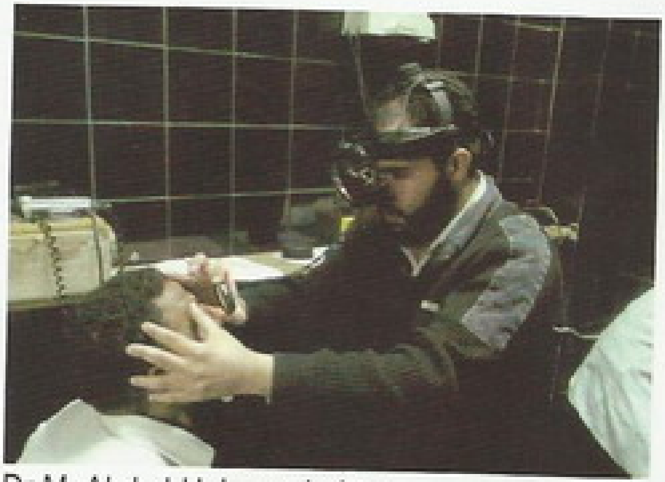
Indirect ophthalmoscope



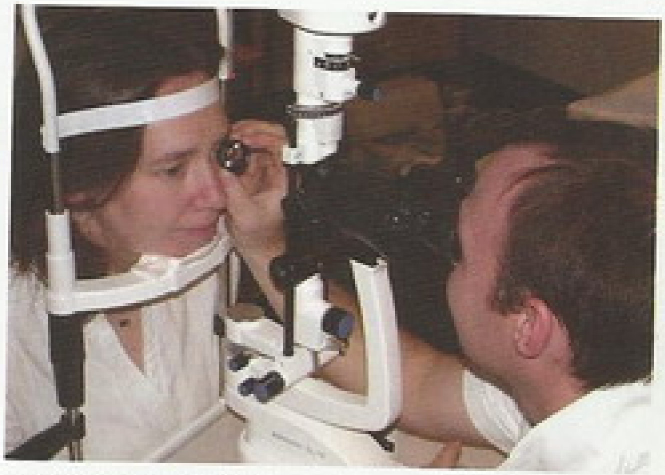
Scleral indentation during indirect ophthalmoscopy to see the periphery of retina



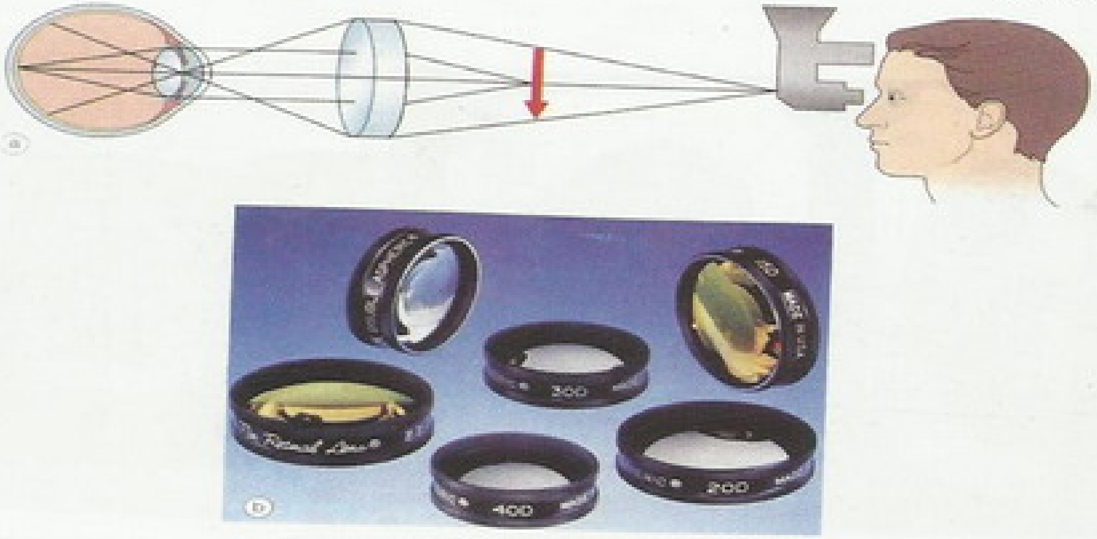
Indirect ophthalmoscope



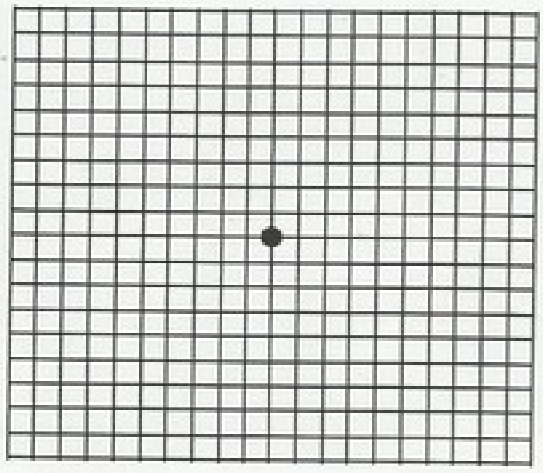
Dr M. Abd el-Haleem during indirect ophthalmoscopy



Slit lamp+ 90D Volk lens is used for fundus examination

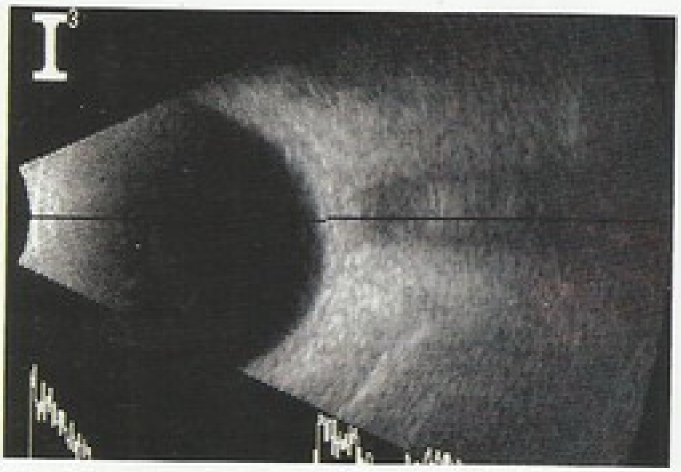


Principle of indirect ophthalmoscopy



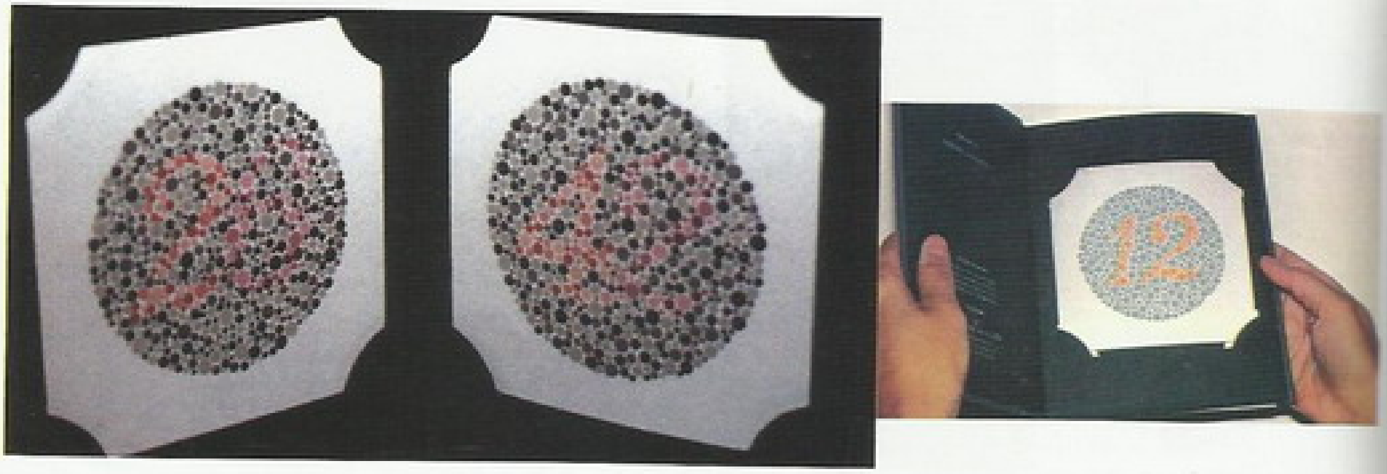
Amsler-grid chart for macular function test.

A & B scan ultrasound machine

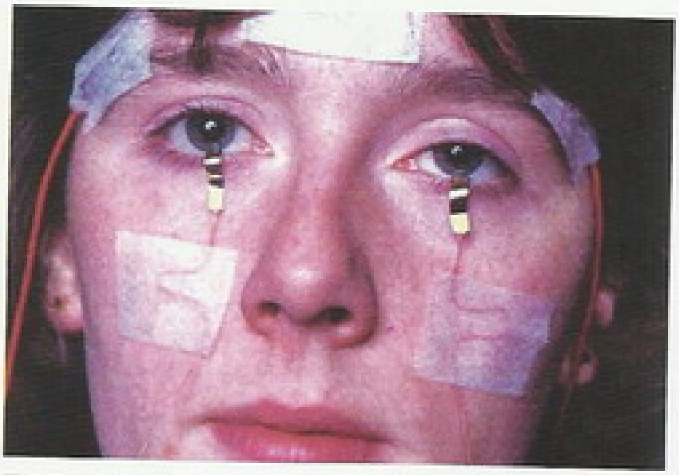


Normal B scan ultrasound

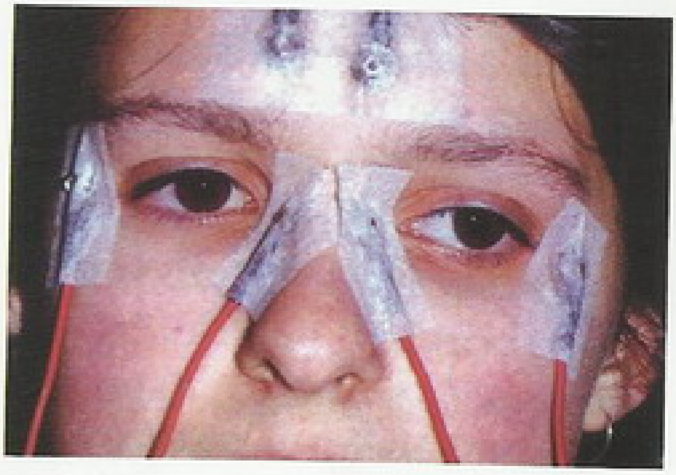
Colored discs is used for testing color vision



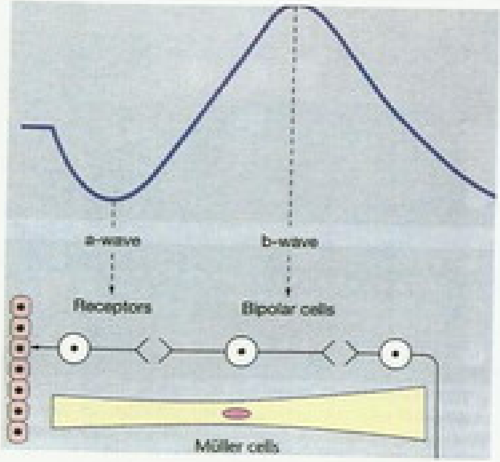
Ishihara cards for testing colour vision



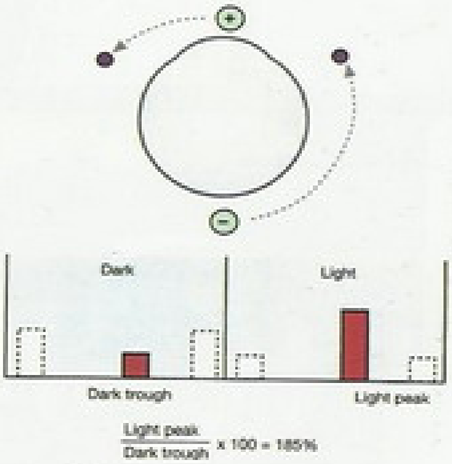
ERG electro-retinogram(note the electrodes on the cornea)



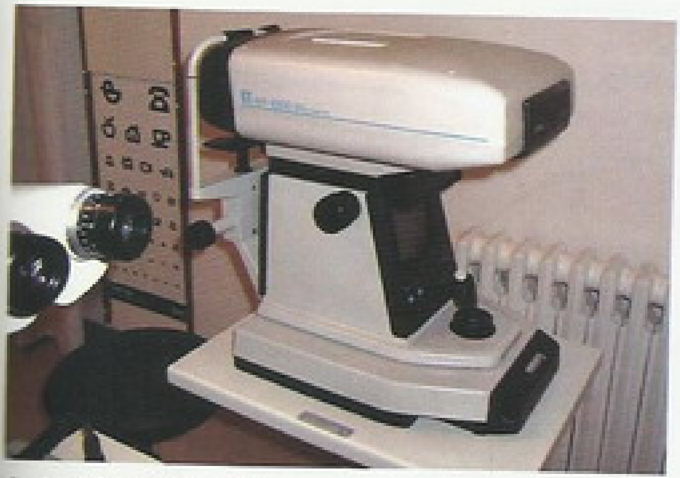
EOG electro-oculogram (note the electrodes on the canthi, angles)


a-wave
b-wave
Receptors
Bipolar cells
Müller cells

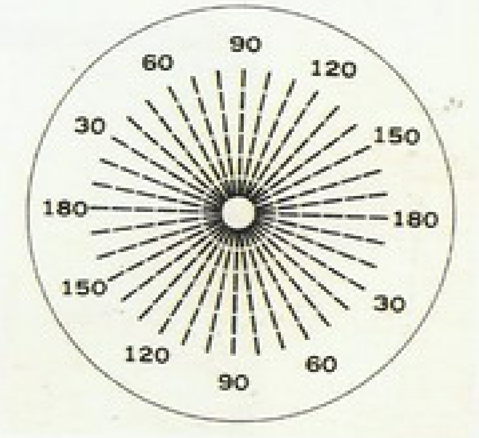
Principle of ERG


+
−
Dark
Light
Dark trough
Light peak
Light peak / Dark trough x 100 = 185%

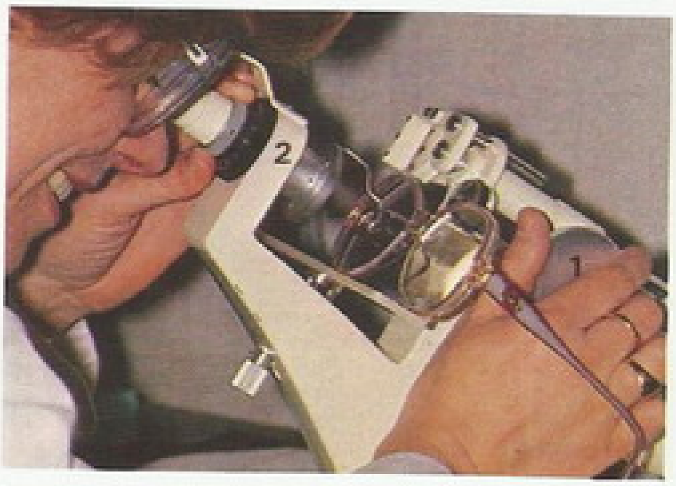
Principle of EOG



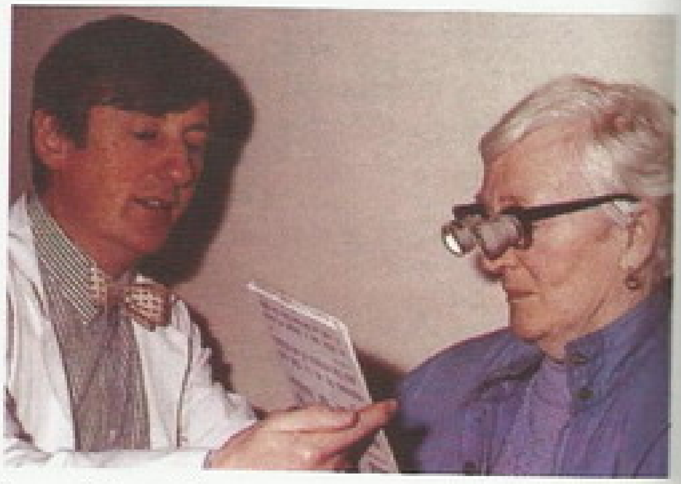
Autorefractometer


90
60
120
30
150
180
180
150
30
120
60
90

Astigmatic fan



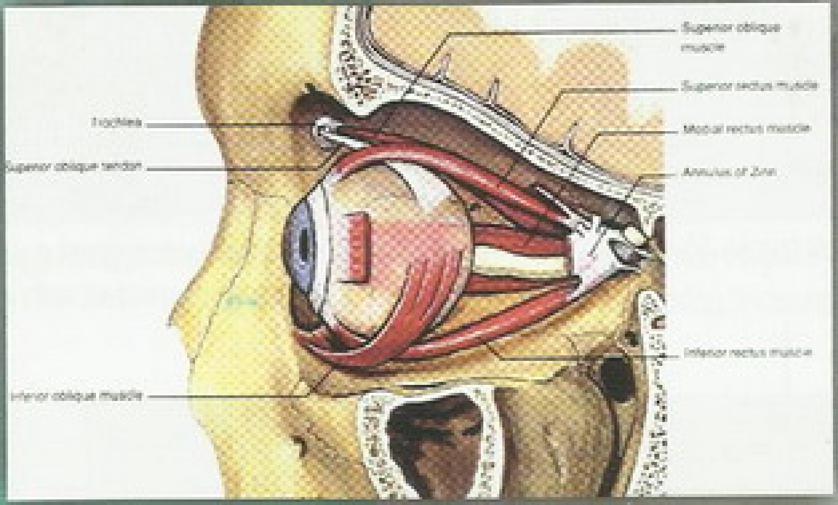
Lensmeter

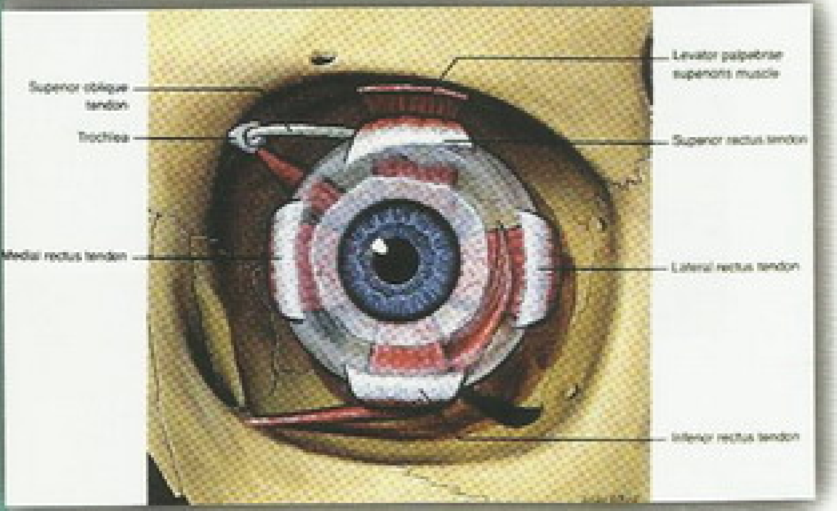


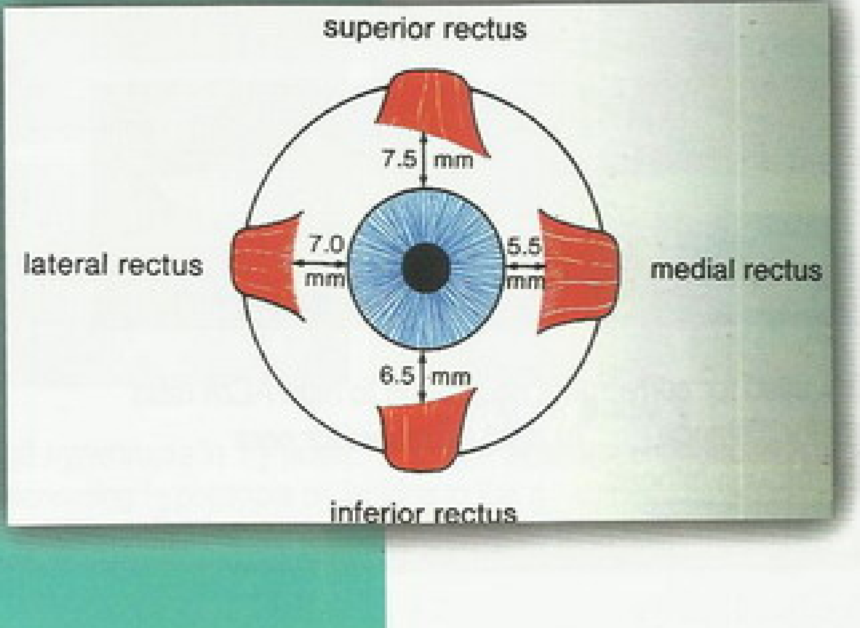
Low vision aid

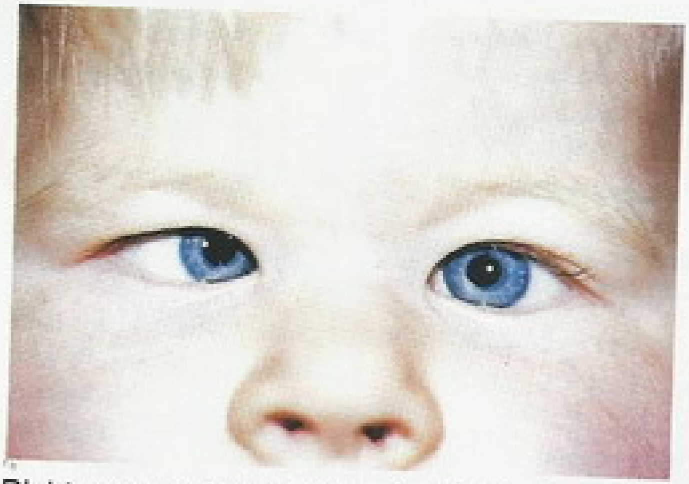
Chapter 11

Squint (Strabismus)

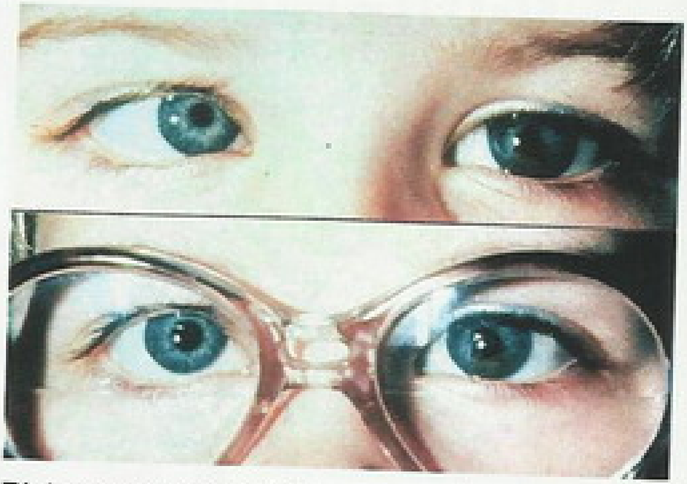

Superior oblique muscle
Superior rectus muscle
Medial rectus muscle
Annulus of Zinn
Trochlea
Superior oblique tendon
Inferior rectus muscle
Inferior oblique muscle


Levator palpebrae superioris muscle
Superior oblique tendon
Trochlea
Superior rectus tendon
Medial rectus tendon
Lateral rectus tendon
Inferior rectus tendon

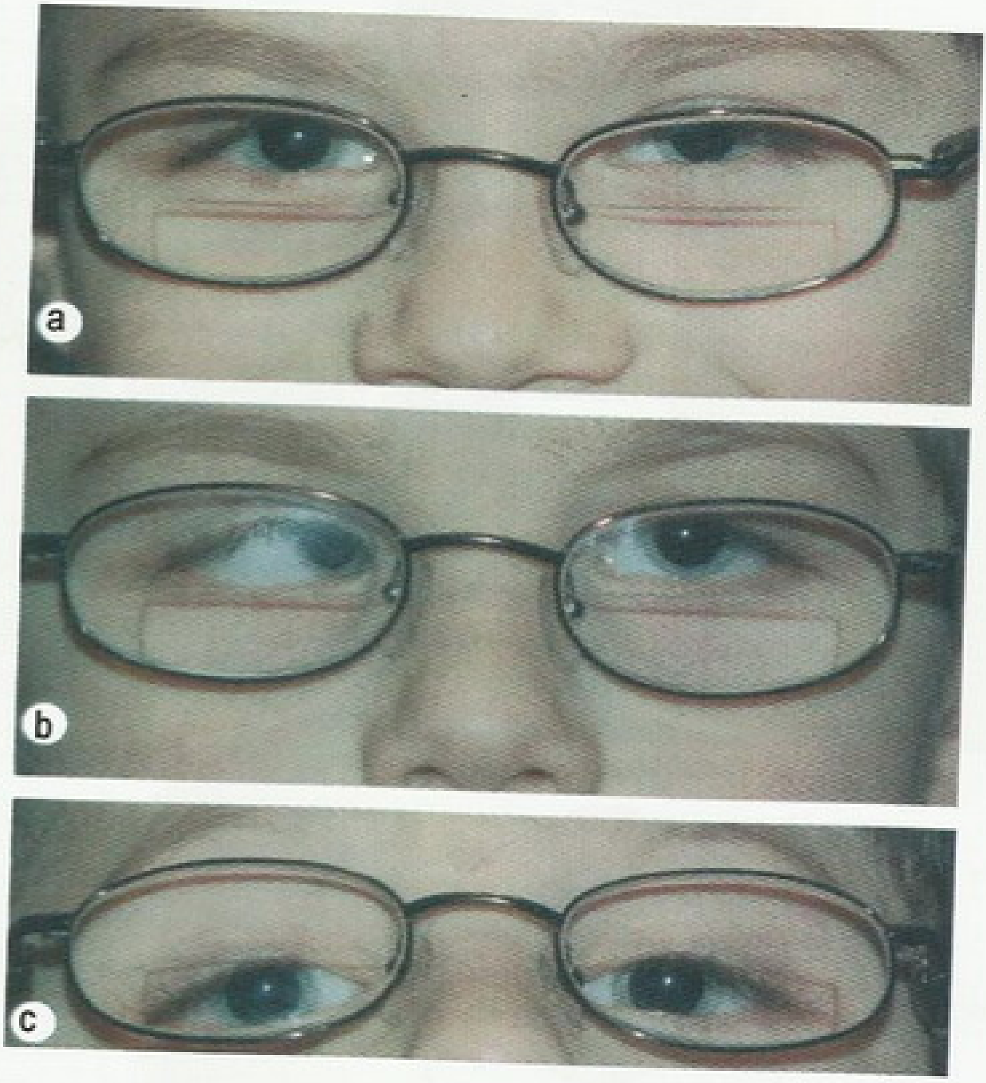

superior rectus
7.5 mm
lateral rectus
7.0 mm
5.5 mm
medial rectus
6.5 mm
inferior rectus



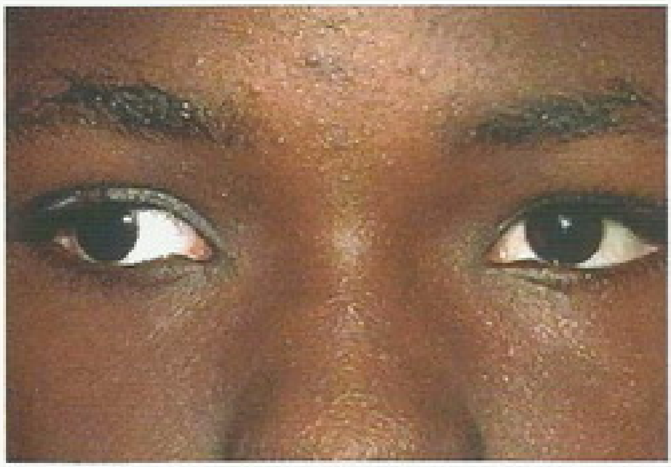
Right convergent squint (esotropia 15 degree)



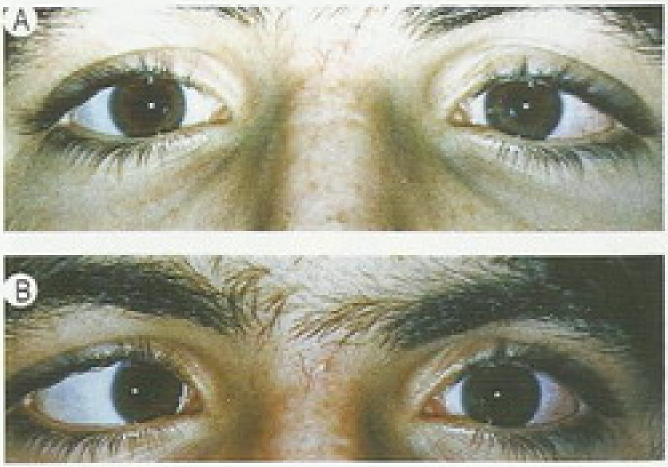
Right accommodative convergent squint (esotropia 30degree), corrected with glasses



Bifocal glasses used for convergent squint due to high AC/A ratio
a) eye straight for distance b) right esotropia for near
c) eye straight through bifocals

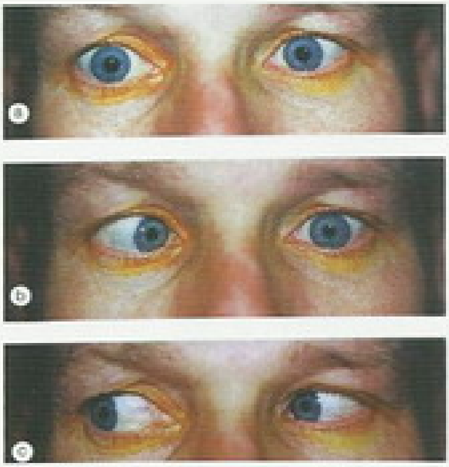


Right divergent squint (exotropia 30 degree)



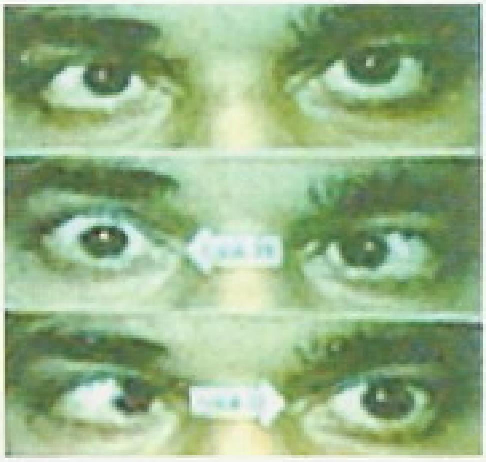
Left 6th nerve palsy

A) pt looking forward B) pt looking to the left

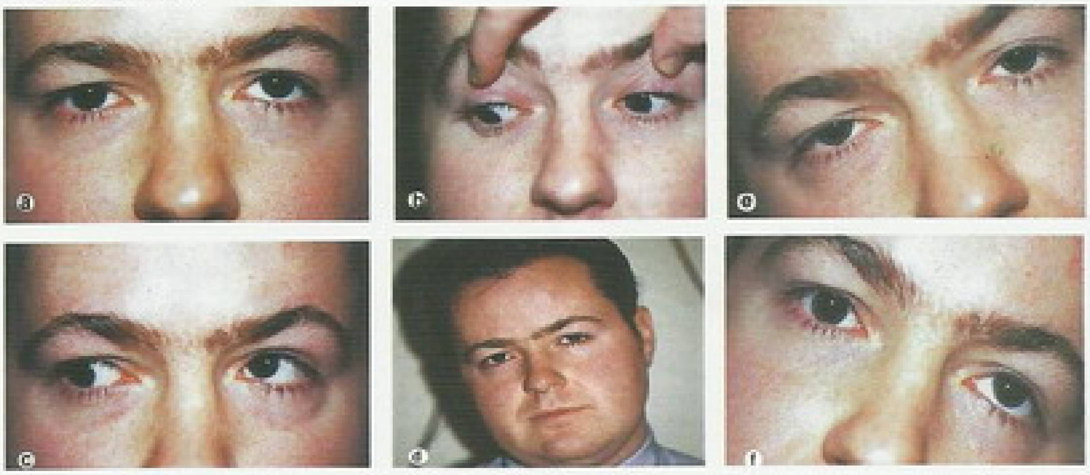


Left 6th nerve palsy

(a) Slight left eso in the 1ry position
(b) Limitation of left abdction
(c) Normal left adduction

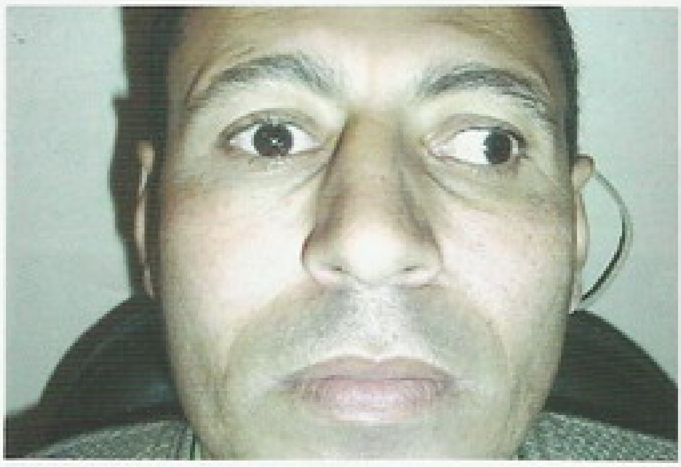


bilateral 6th nerve palsy

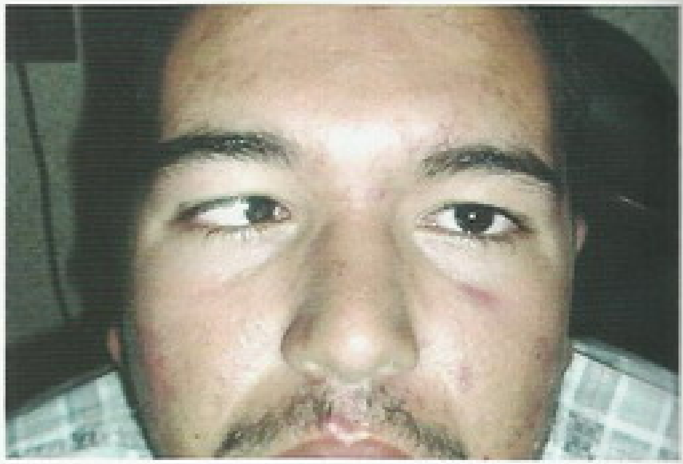


Left 4th n. plasy

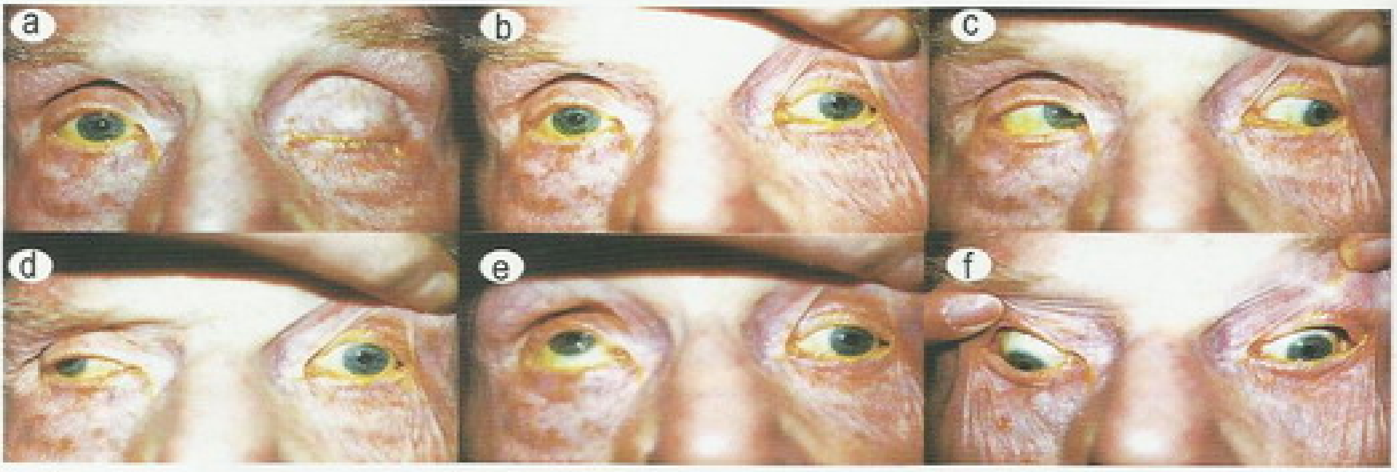
a) left hypertropia in 1ry position b) Left limitation of depression in adduction
c) increasing hypertropia on looking to the rt d) head tilt & face turn to rt , chin deprssion
e) & f) +ve Bieldchowsky test: no hypertropia on head tilt to right , marked hypertropia on head tilt to the left



Left exotropia (45 degree)

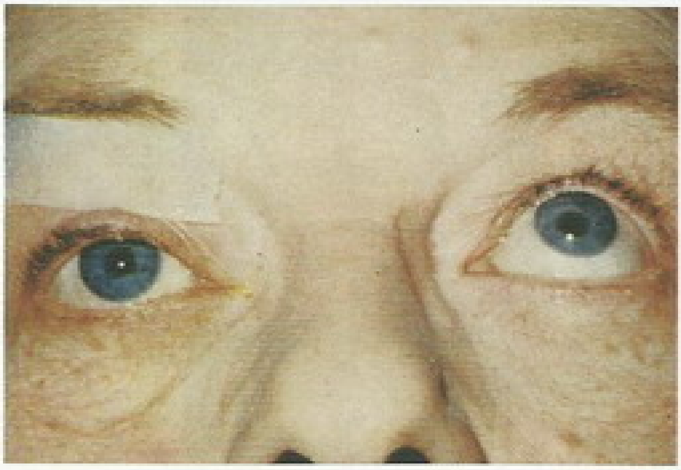


Right esotropia (45 degree)

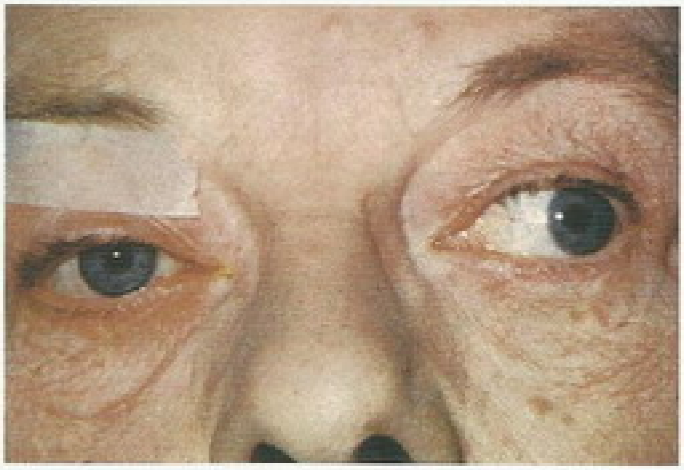


Left 3rd nerve palsy

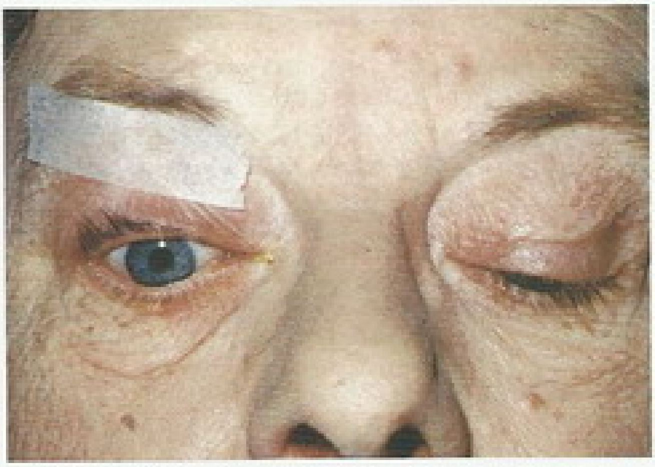
a) Severe ptosis
b) left eye deviated out
c) normal abduction of left eye
d) failure of adduction of left eye
e) failure of elevation of left eye
f) failure of depression



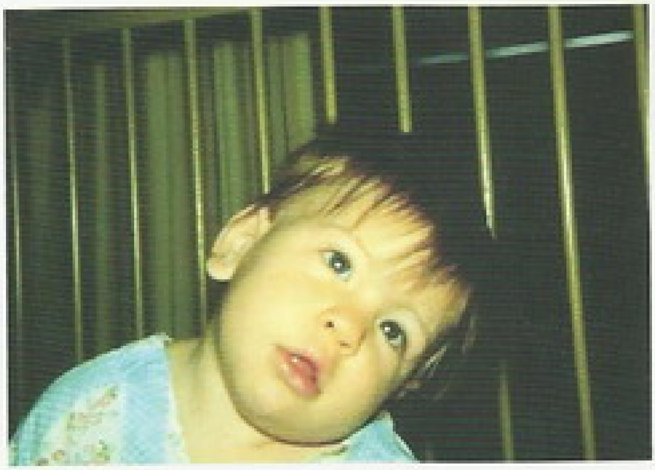
Right 3rd N. palsy: Showing failur of elevation



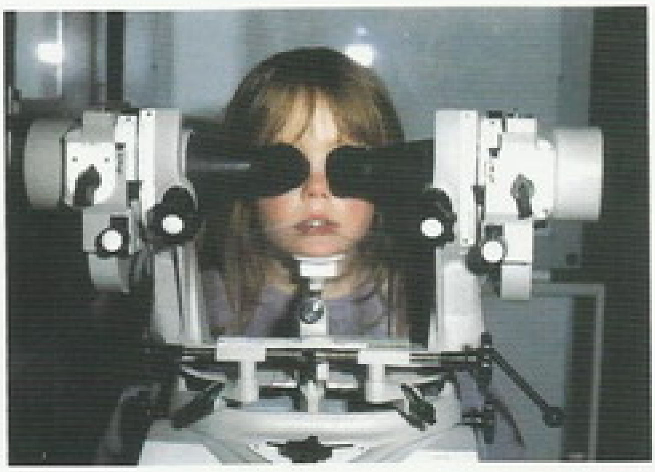
Right 3rd N. palsy: Showing failur of adduction



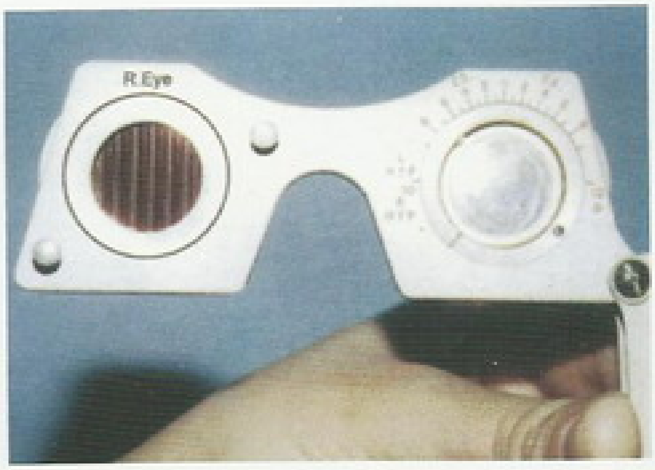
Right 3rd N. palsy: Showing failur of depression



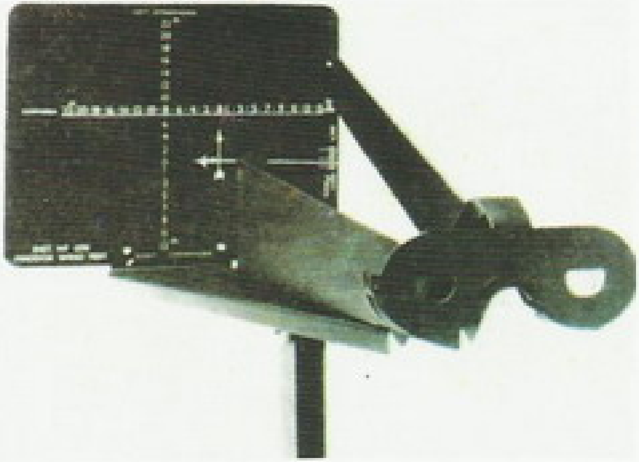
Head tilt



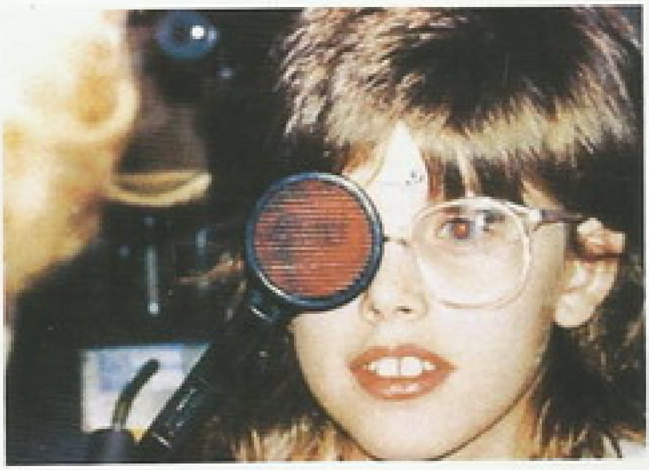
Synoptophore



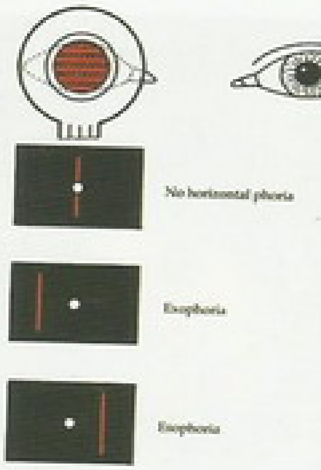
Maddox rod



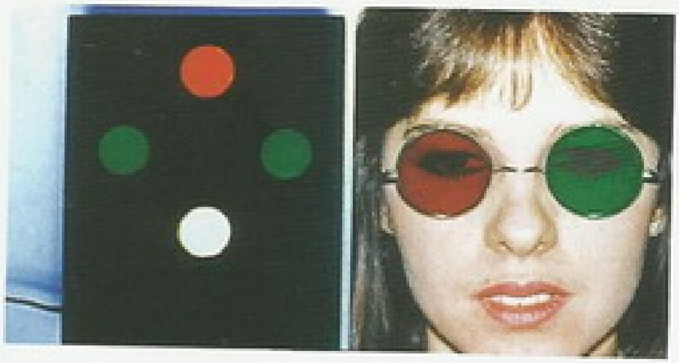
Maddox wing



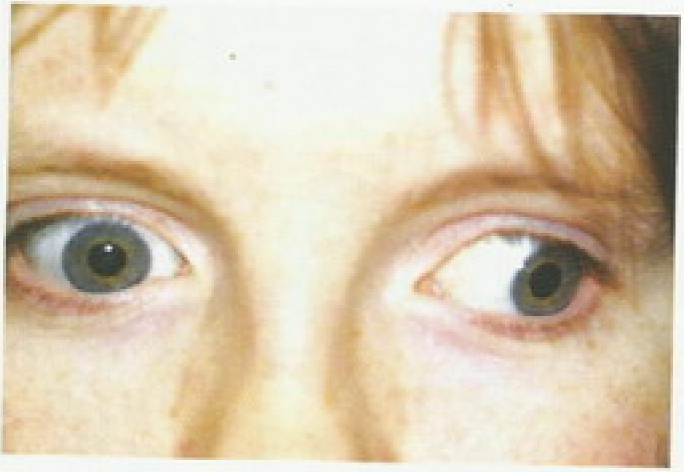
Maddox rod



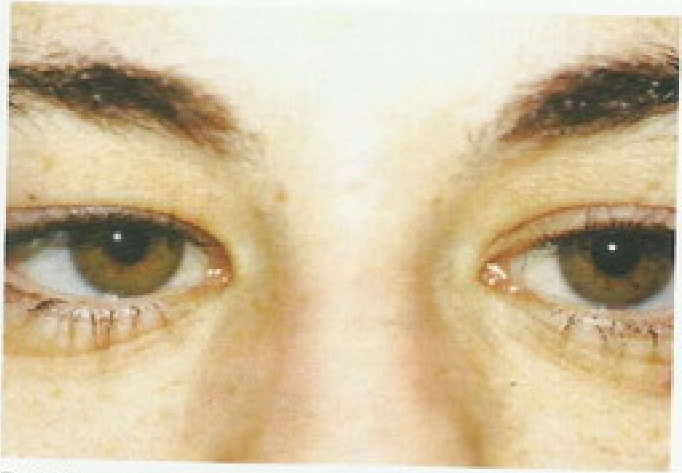
Maddox rod results



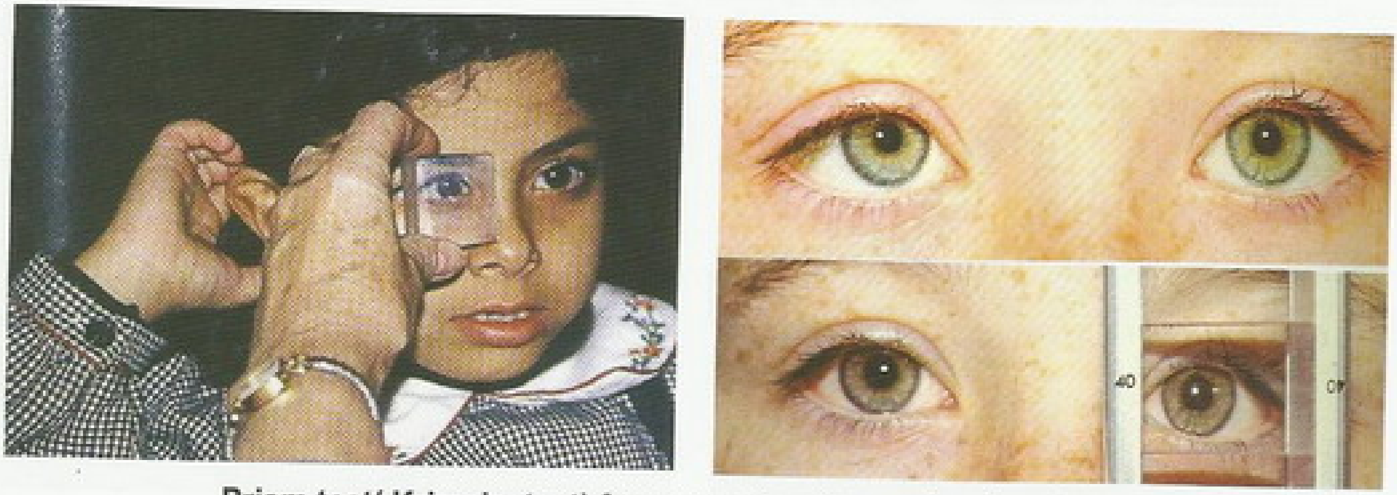
Worth's 4 dot test with red green goggles



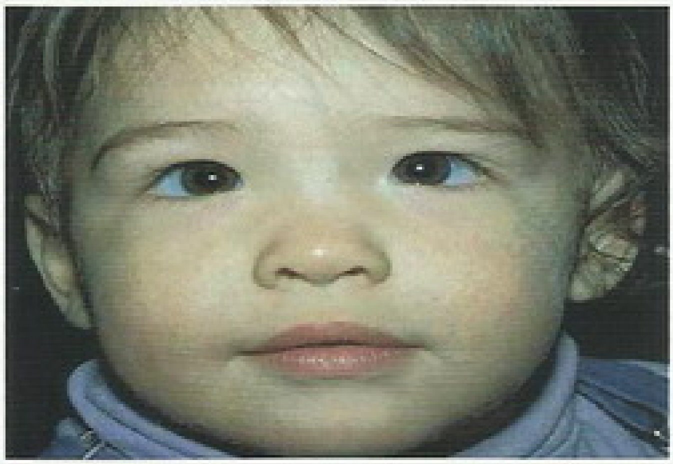
Left divergent squint, **45 degree**
Using **Hirschberg test** the corneal reflex at the limbus



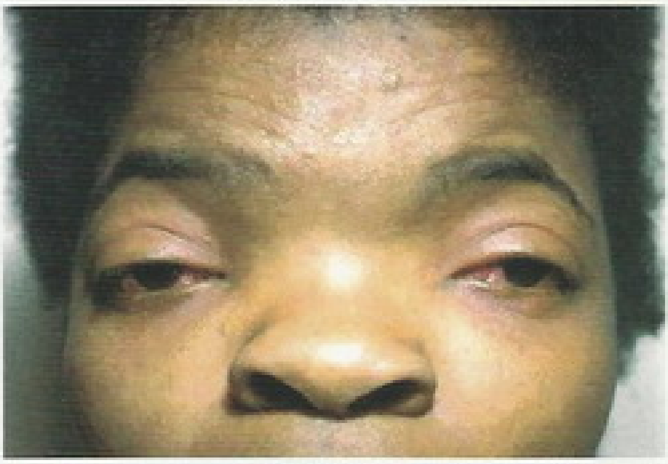
Right convergent squint, **15 degree**
Using **Hirschberg test** the corneal reflex at the edge of pupil



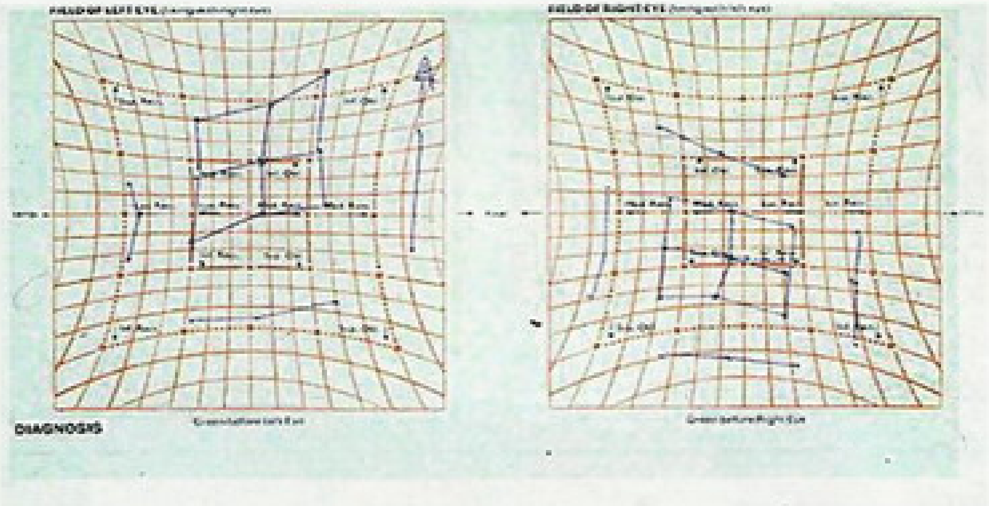
Prism test(Krimsky test) for measuring the angle of squint:
prism of increasing power placed infront of the fixing eye
(base against deviation) untill the squinting eye becomes straight



Epicanthus lead to apparent convergent squint (cornea light reflex is central)



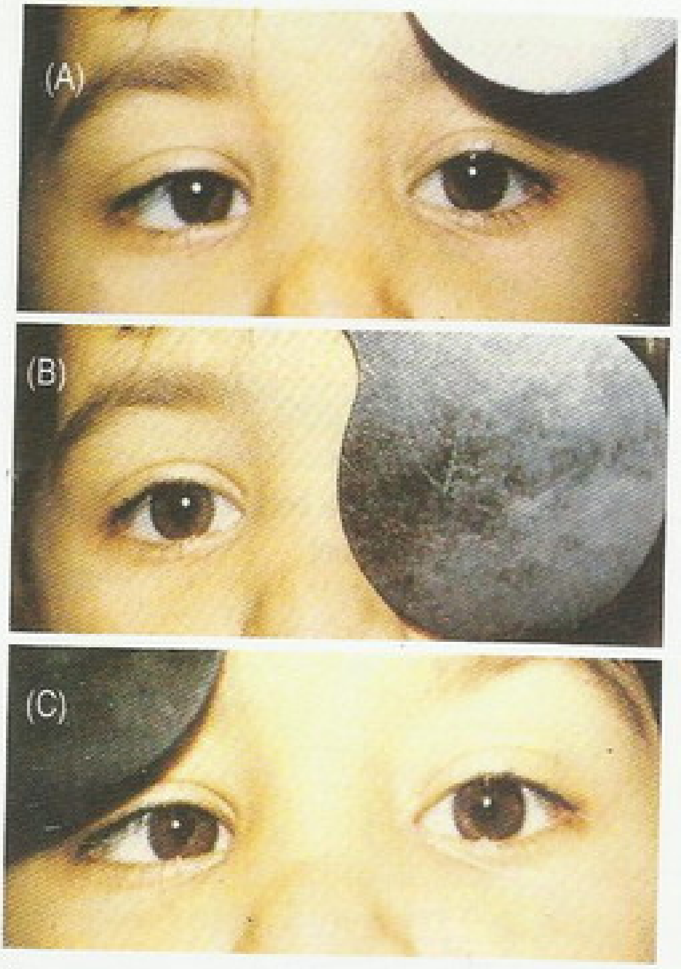
Negroes with large nasal bone lead to apparent divergent squint



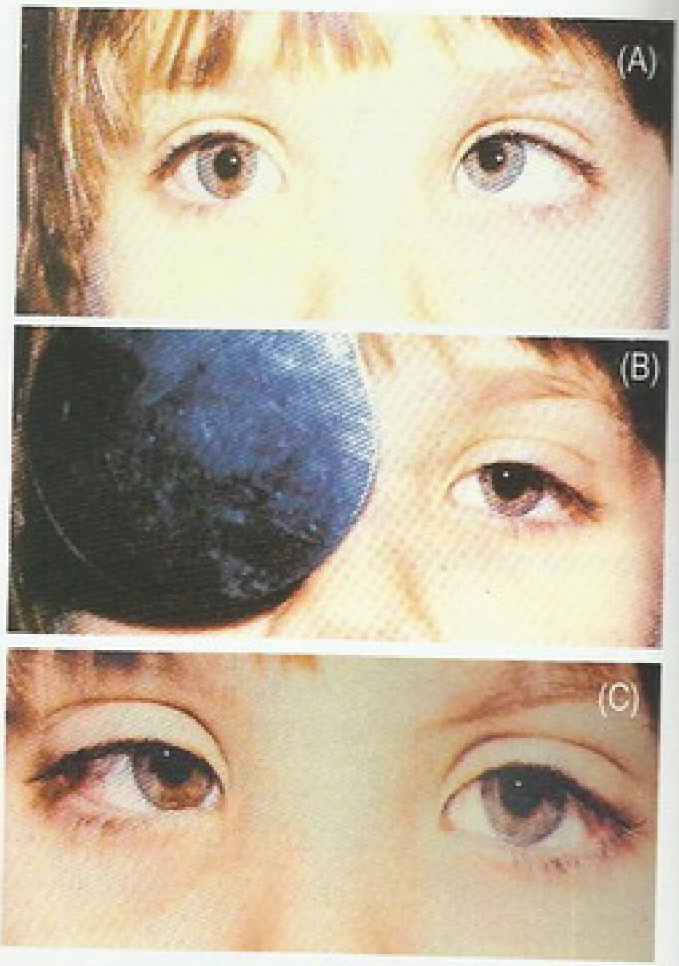
Hess screen for dignosis of paralytic squint

Patching for treatment of ambylopia

Cover test



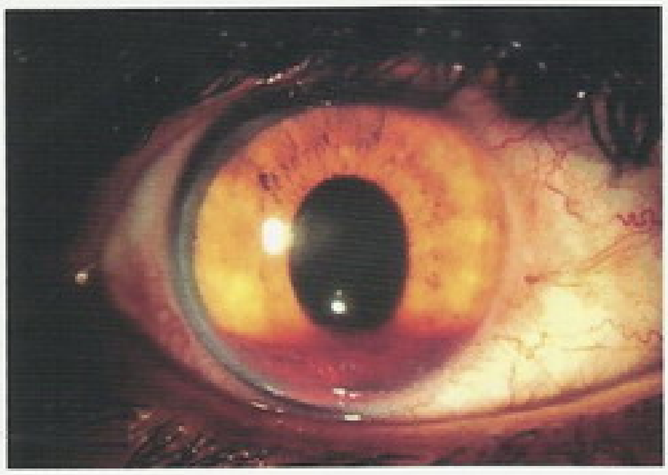
Cover-uncover test (unilateral squint = bad fixation of the squinting eye)



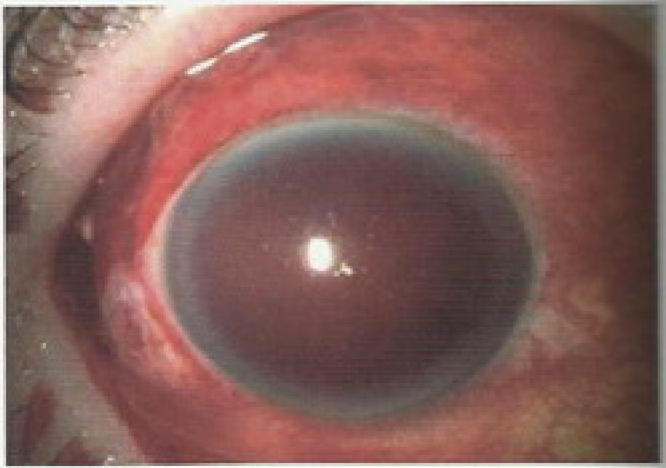
Cover-uncover test (Alternating squint = good fixation of the squinting eye)

Chapter 12

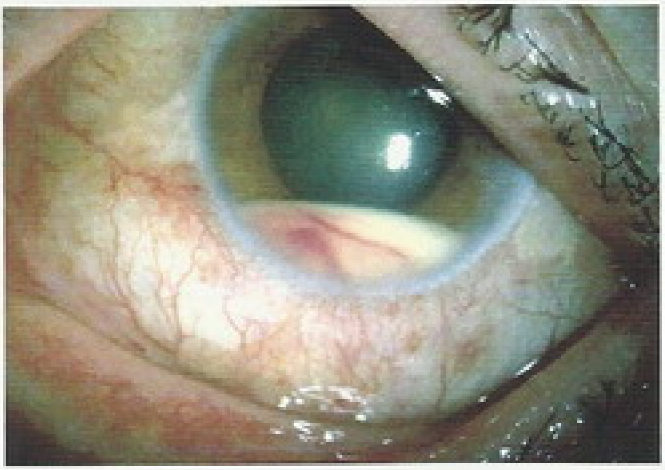
Eye Injuries



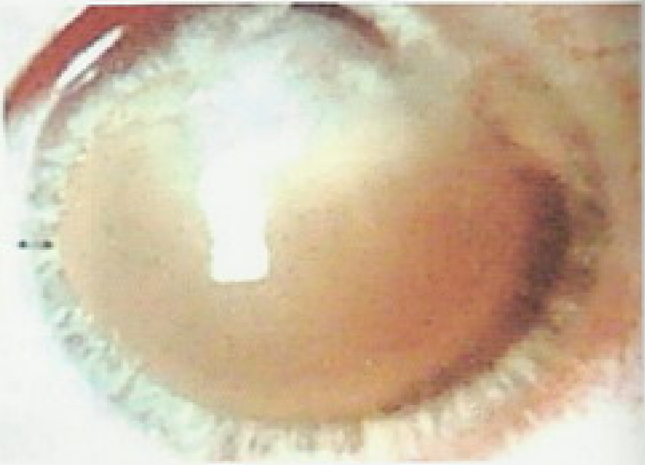
Hyphaema



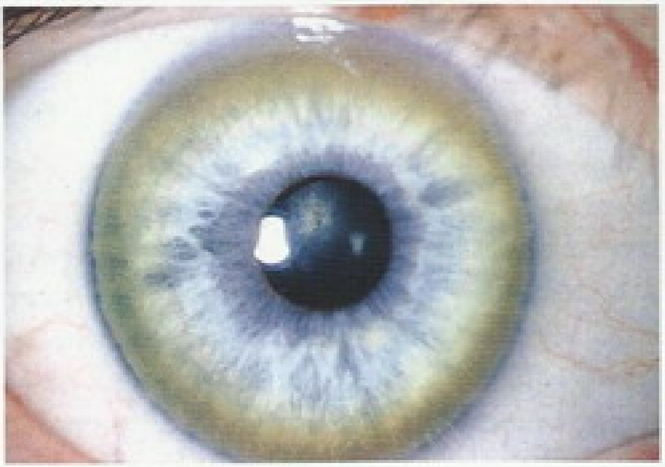
Total hyphaema (blood staining of the cornea)



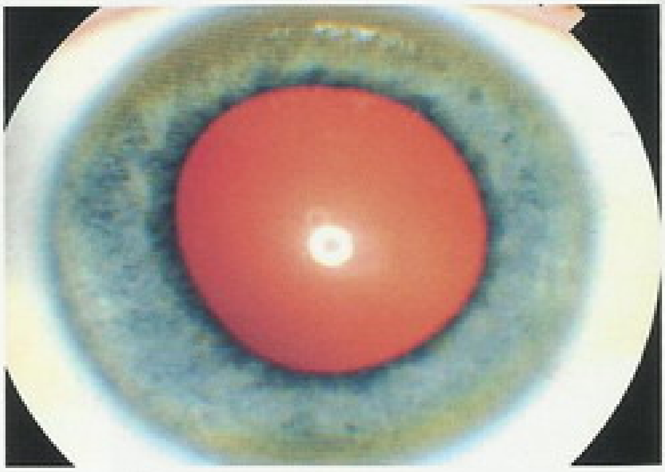
mixed hypopyon & hyphaema



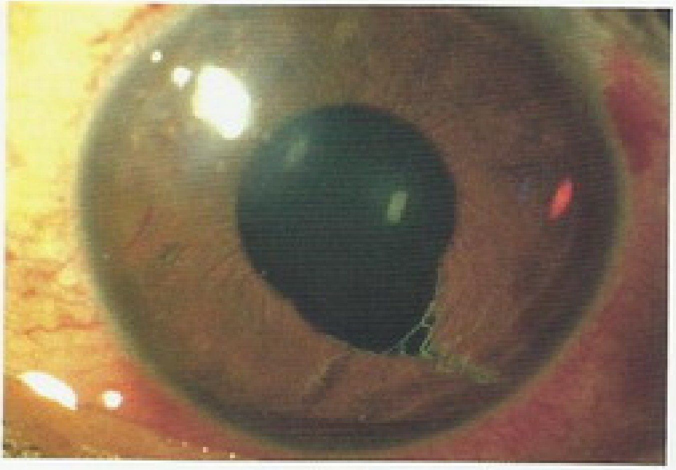
Total hyphaema (blood staining of the cornea)



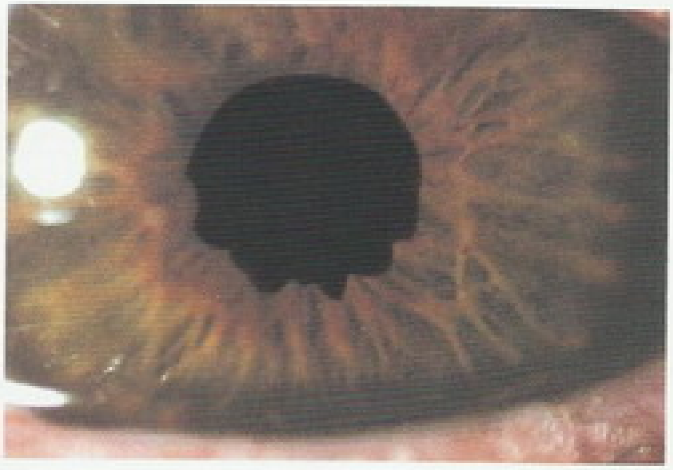
Kayser-Flisher ring in Wilson's disease



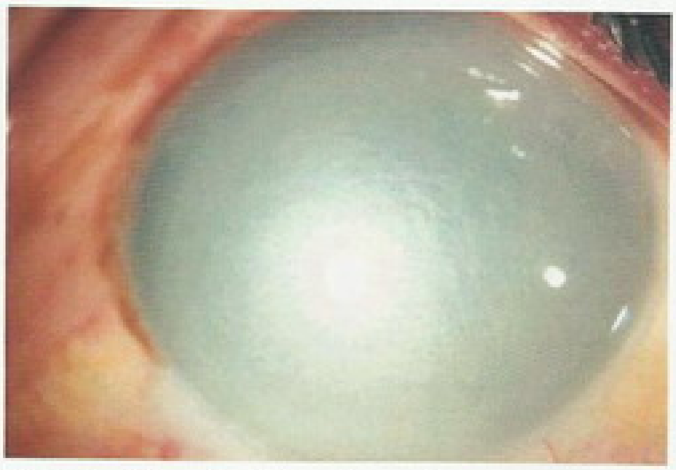
Kayser-Flisher ring in Wilson's disease



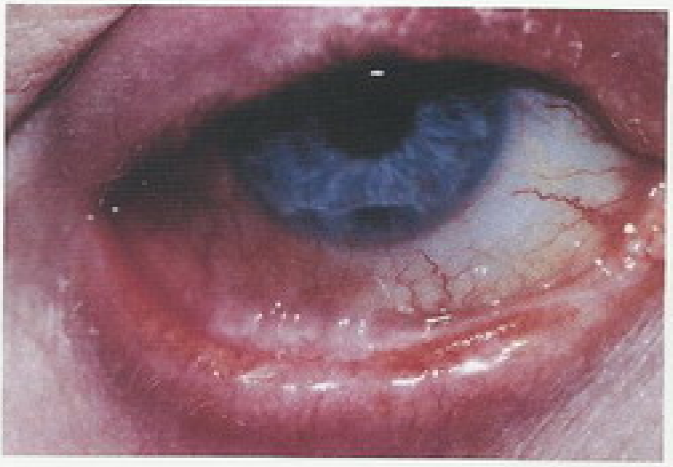
V-shaped iris laceration



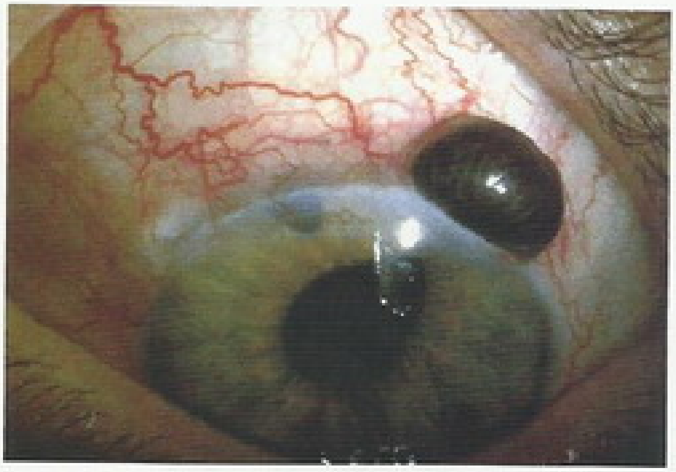
Rupture of the iris sphincter



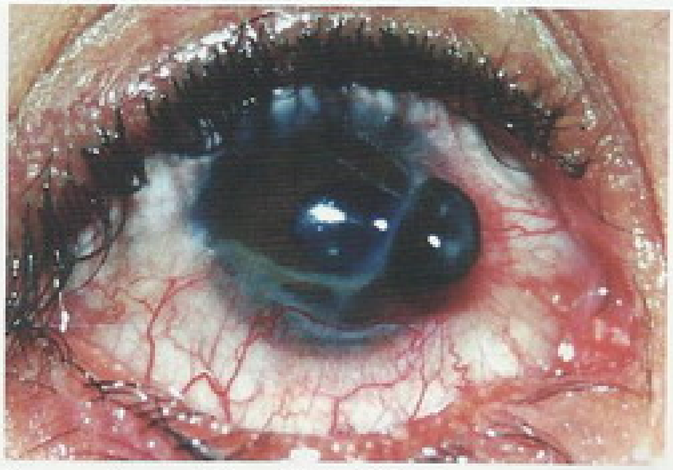
Chemical burn(no blood vessels seen = Porcelain appearance)



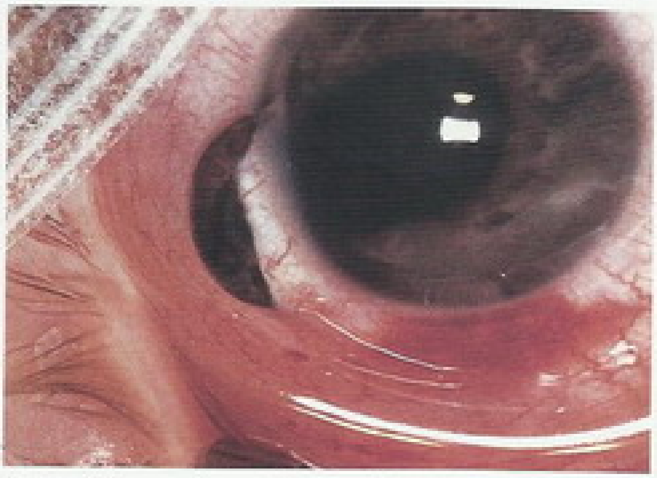
Symblepharon after chemical burn



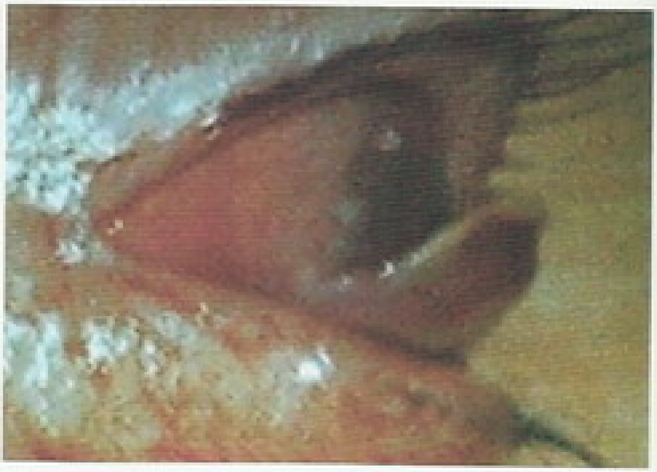
Scleral laceration with iris &C.B prolapse (Rupture globe) Note: drawn up pupil



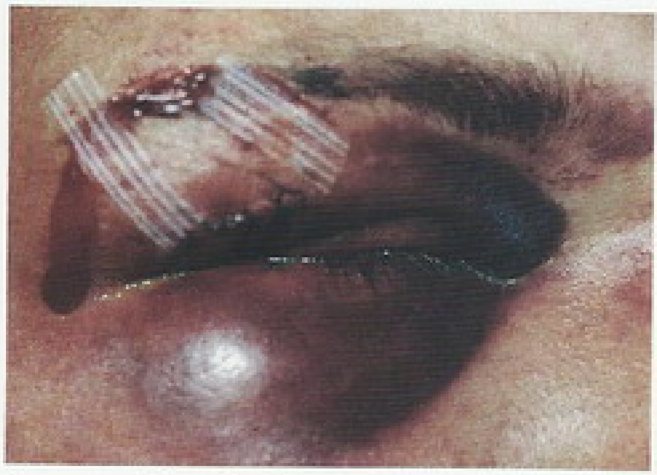
Corneal laceration with iris &C.B prolapse (Rupture globe)



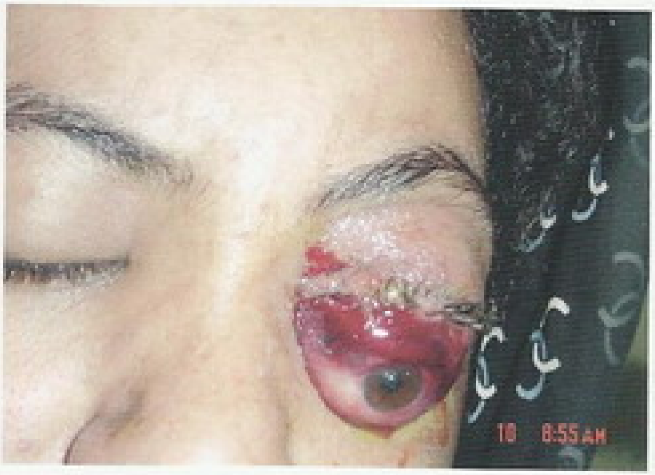
Scleral laceration with iris &C.B prolapse (Rupture globe) Note: drawn up pupil



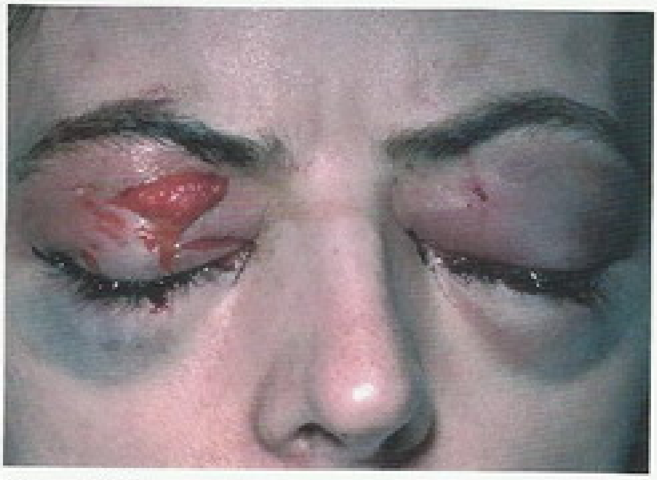
Rupture globe



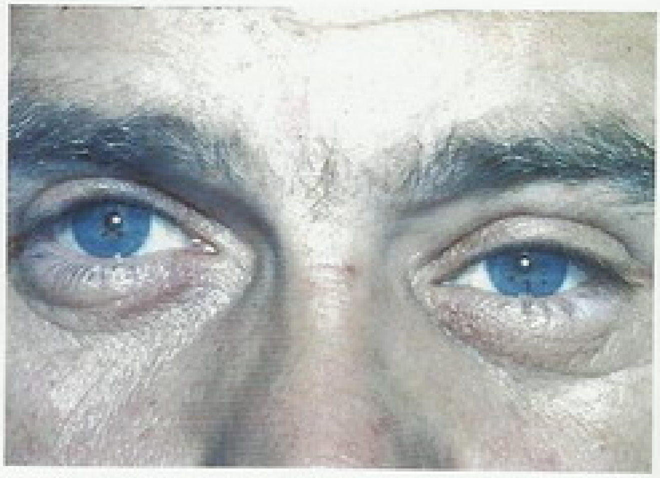
Severe peri-ocular haematoma



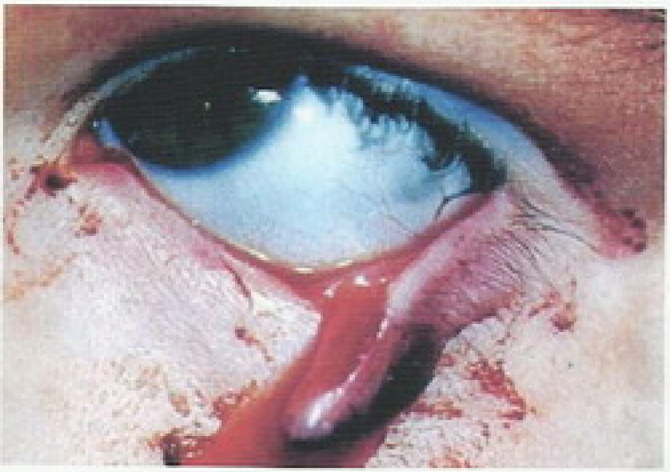
Rupture globe



Upper lid laceration

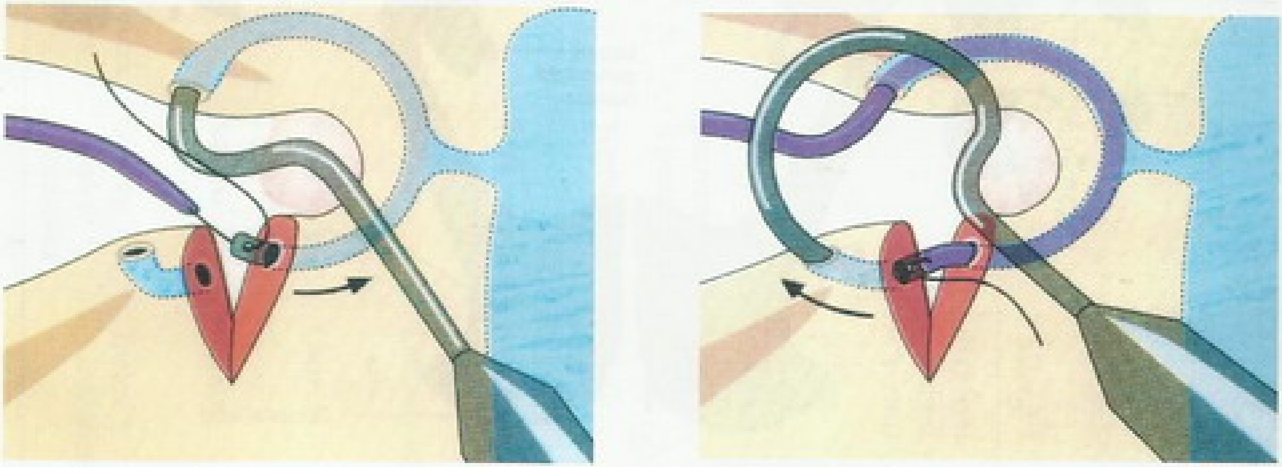


Left orbital floor fracture with hypophthamos &ptosis



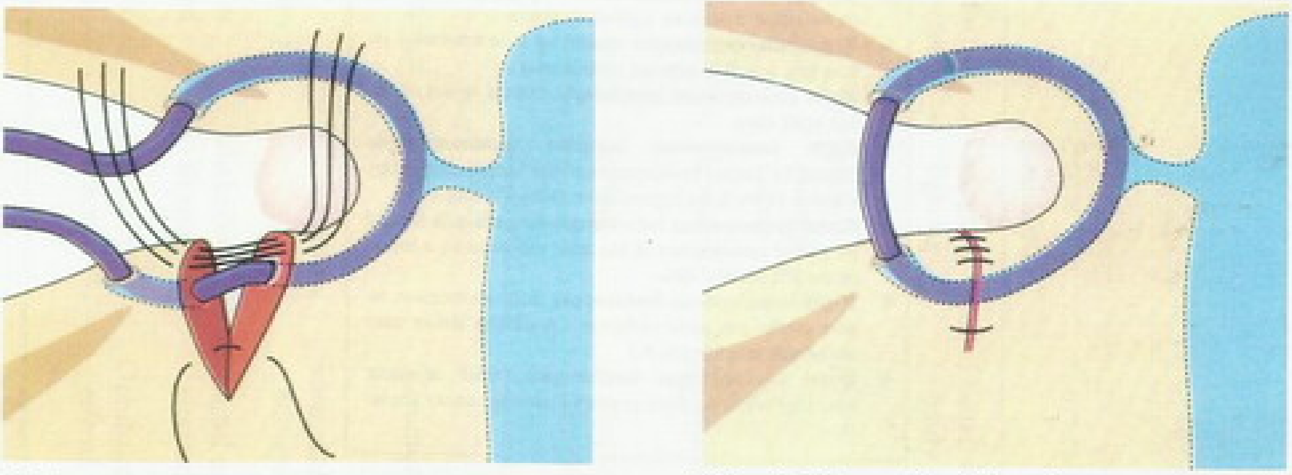
Laceration of lower lid with affection of the canaliculi

The way of repair



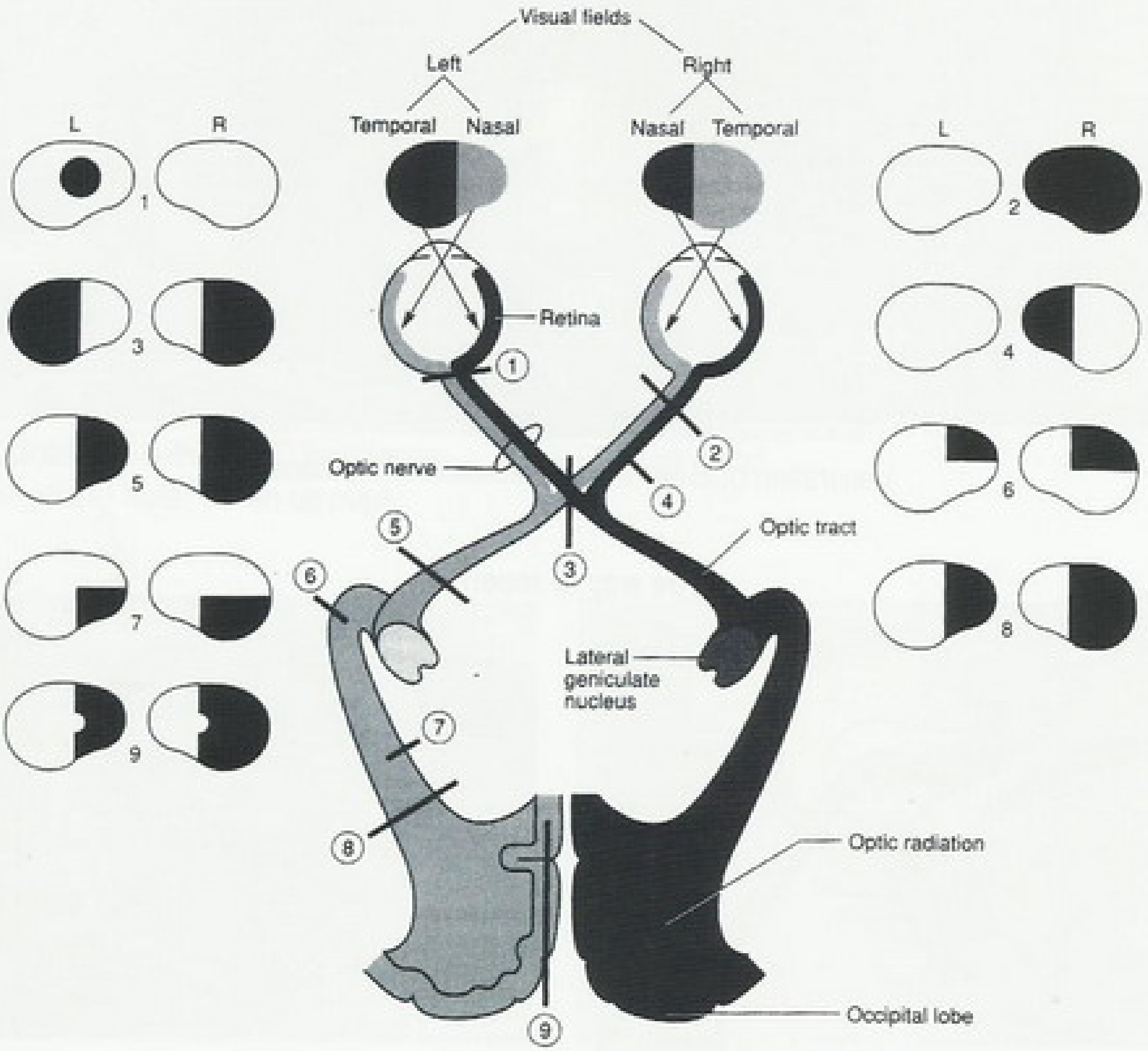
(a) pig tail probe is introduced through the the un-injuried upper canaliculus

(b) insertion of lacrimal silicon tube



(c) insertion of lacrimal silicon tube

(d) finally the ends of the tube are joined to form a ring


Visual fields
Left
Right
Temporal
Nasal
Nasal
Temporal
L
R
L
R
1
2
3
4
5
6
7
8
9
Retina
Optic nerve
Optic tract
Lateral geniculate nucleus
Optic radiation
Occipital lobe
①
②
③
④
⑤
⑥
⑦
⑧
⑨

1. **Central scotoma** caused by inflammation of the optic disk (optic neuritis) or optic nerve (retrobulbar neuritis).
2. **Total blindness of the right eye** from a complete lesion of the right optic nerve.
3. **Bitemporal hemianopia** caused by pressure exerted on the optic chiasm by a pituitary tumor.
4. **Right nasal hemianopia** caused by a perichiasmal lesion (eg, calcified internal carotid artery).
5. **Right homonymous hemianopia** from a lesion of the left optic tract.
6. **Right homonymous superior quadrantanopia** caused by partial involvement of the optic radiation by a lesion in the left temporal lobe (Meyer's loop).
7. **Right homonymous inferior quadrantanopia** caused by partial involvement of the optic radiation by a lesion in the left parietal lobe.
8. **Right homonymous hemianopia** from a complete lesion of the left optic radiation. (A similar defect may also result from lesion 9.)
9. **Right homonymous hemianopia (with macular sparing)** resulting from posterior cerebral artery occlusion.

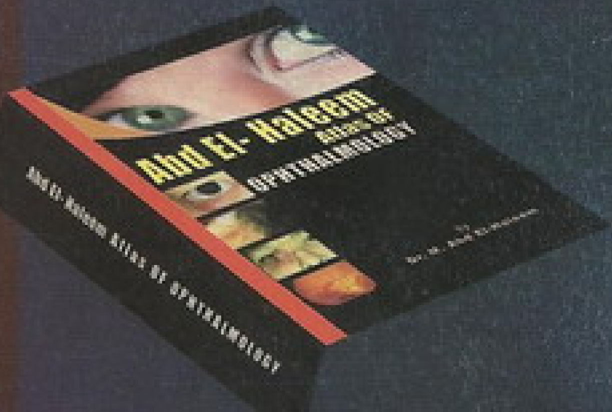
Figure Common visual field defects and their anatomic bases.

Appendix: Red eye

Signs and symptoms of different causes of a red eye

Signs and Symptoms	Conjunctivitis	Subconjunctival haemorrhage	Corneal abrasion	Allergy	Iritis	Acute glaucoma	Corneal ulcer
History	Family/ friend	Trauma, hypertension	Injury	Hay fever, asthma, eczema	Nil or other inflammatory disease	Change of lighting	Contact lens, injury
Sensation	Grittiness	None,mild irritation	Pain, photophobia	Itching	Pain, photophobia	Pain, photophobia, nausea	Pain, photophobia
Vision	Normal	Normal	Decreased (if central)	Normal	Decreased	Decreased	Decreased
Discharge	Purulent/clear	None	Tearing	Mucus	Tearing	Tearing	Tearing and mucopurulent
Pupillary light reflex	Brisk	Brisk	Brisk	Brisk	Sluggish	Mid-dilated and fixed	May be sluggish
Conjunctival injection	Diffuse, tarsal area	Localized, bright red	Diffuse	Diffuse,tarsal area	Circumcorneal	Diffuse	Circumcorneal
Corneal appearance	Clear	Clear	Stains with fluorescein	Clear	Keratic precipitates	Cloudy cornea	Stains with fluorescein
Intraocular pressure	Normal	Normal	Normal	Normal	Normal or elevated	Markedly elevated	Normal or elevated
Basic management	Hygiene,may require topical antibiotics	Reassurance, check blood pressure	Padding, topical antibiotics	Topical antihistamine	Ophthalmic referral	Ophthalmic referral	Ophthalmic referral

- Ophthalmologic Atlas..... Mohammad Abd El Haleem gives some splendid slides and examples...His range of reference is impressively wide. He conveys large amounts of detail with a pleasant urgency.
- A comprehensive, up-to-date viewpoint on diverse cases and issues related to ophthalmology.
- Highly recommended for students, faculty and professional doctors.
- Provocative and diverse, this Atlas explores the anxious relationships between different similar and dissimilar medical cases.
- Useful friendly format for examinations.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LOTUS VISION